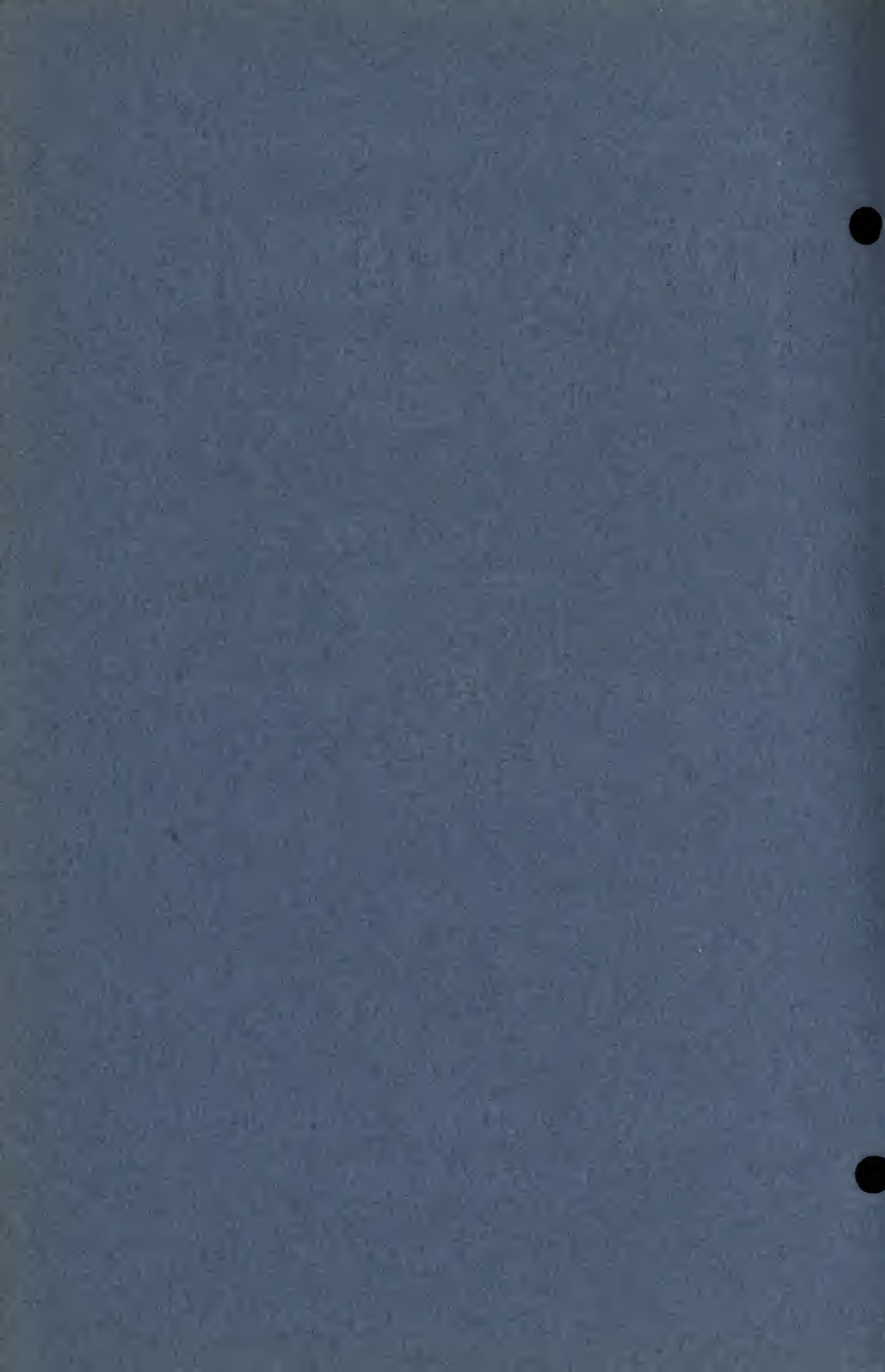


PLANOIDAL FANS

CATALOG 200



BUFFALO FORGE COMPANY
BUFFALO, N.Y.





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BUFFALO, N. Y.

CATALOG No. 200

BUFFALO PLANOIDAL FANS

(TYPE L)

BUFFALO FORGE COMPANY
BUFFALO, N. Y.

NEW YORK

BOSTON

PHILADELPHIA

CHARLOTTE, N. C.

LONDON, ENGLAND

CHICAGO

CLEVELAND

PITTSBURGH

DETROIT

ATLANTA

ST. LOUIS

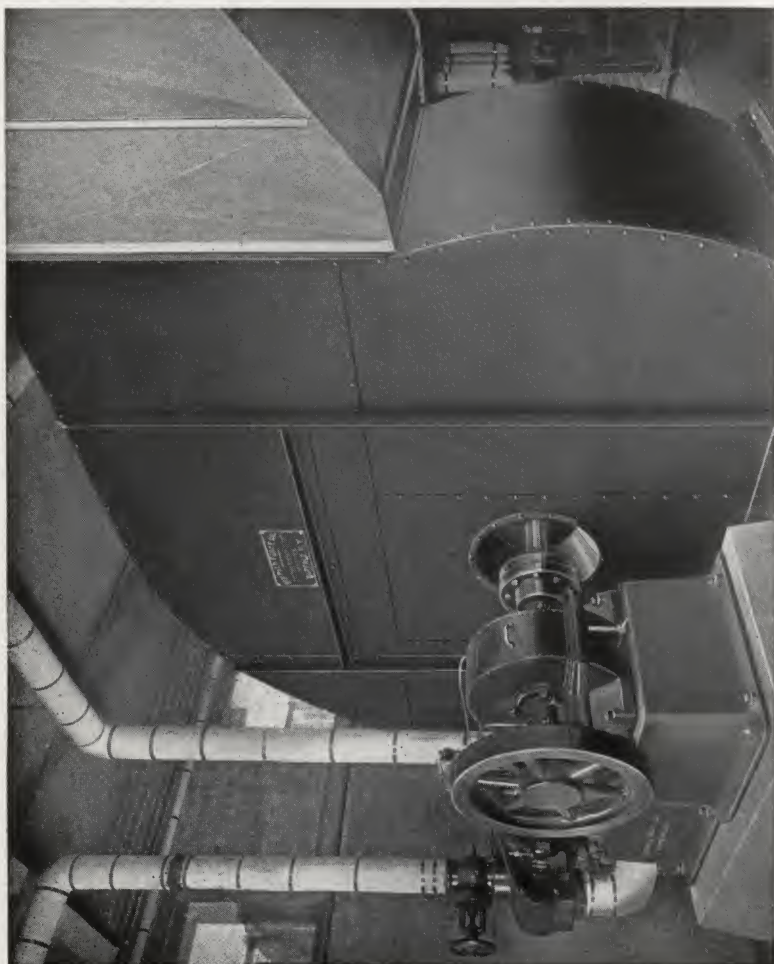
KANSAS CITY, MO.

DENVER

LOS ANGELES

PORTLAND, ORE.

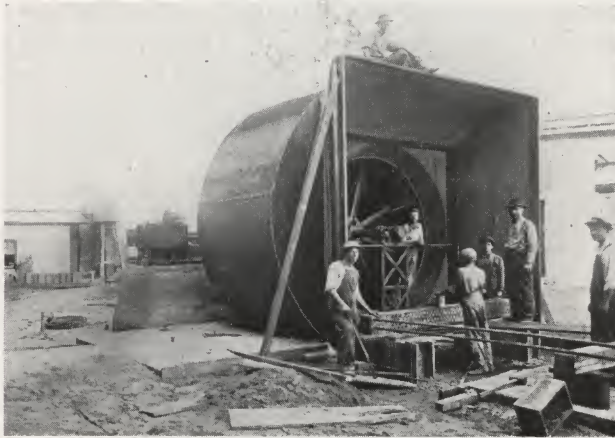
THE CANADIAN BUFFALO FORGE CO., Ltd.
BERLIN, ONTARIO



Planoidal Fan with Low Pressure Enclosed Engine
Typical Ventilating Apparatus for Schools or Public Buildings

PLANOIDAL (TYPE L) FANS

For many years it was a matter of common knowledge that the various makes of steel plate fans on the market were of inefficient design and in the case of most manufacturers, proportions were not the same, even for the same type of fans in different sizes. These fans, which have come to be known as steel plate or radial blade fans, were given ratings which were incorrect and misleading, so that the best informed engineers could only make an approximation at the factor of safety necessary for the use of the published ratings.

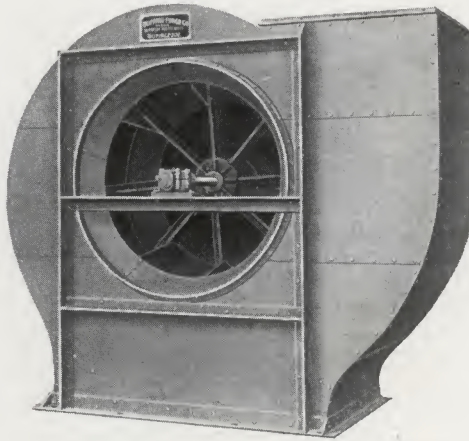


230" Fan at Indiana Cotton Mills, Cannelton, Ind.

It has always been the policy of this company to publish information on its products as accurately as possible, no matter whether this information compared favorably with publications of other manufacturers or not. Our data has been conservative and has been accompanied by such information as would enable engineers to make corrections for local conditions.

Realizing the need of an efficient steel plate fan, extensive experiments and tests have resulted in the design and type here presented, which is a modification of our previous type steel plate fan and is designated as the Planoidal or Type "L" as a means of distinguishing it from the ordinary steel plate fan and from our multiblade fan sold under the trade name of "Niagara Conoidal." The Planoidal fan is naturally of improved design, uniform throughout all sizes and has been thoroughly tested for all conditions, with the result that the capacity and horsepower tables presented in this catalog are guaranteed to be correct and conservative.

It is quite a mistaken idea that multiblade type fans are necessarily more efficient than centrifugal fans with few blades. Extensive advertising and too enthusiastic claims have produced that impression, which is not borne out by the facts in spite of the other advantages of the multiblade type, such as higher speed and reduced space required. It is true that as compared with the ordinary type of steel plate fan having 5 or 6 radial blades not particularly well proportioned for the essentials of fan design, multiblade fans,



Full Housing Planoidal Fan, Showing Cone Inlet
Right-Hand Up Discharge

of which the Niagara Conoidal is the best example, will show approximately 10% better efficiency, but if space requirements are not essential, radial blade fans having a small number of floats in the blast-wheel may be designed with suitable proportions so as to have as good or better efficiency than any multiblade fan. In our Planoidal or Type "L" fan we have incorporated a number of the features which make for efficiency, whether in connection with fans having many blades or few, such as improved scroll proportions of the housing, in which the velocity is reduced gradually without loss by shock and inlet cones giving gradual increase of velocity with the same object in view, that of eliminating all unnecessary losses due to sudden change of velocity.

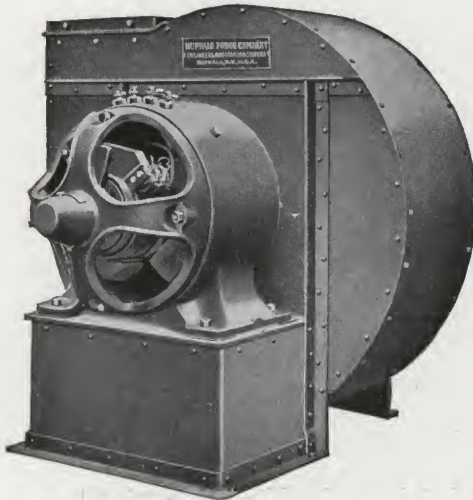
The Planoidal fan is more efficient than any other steel plate fan built with an equal number of blades and will for ordinary heating and ventilating work show no appreciable inferiority to the most efficiently designed multiblade fans.

P L A N O I D A L (T Y P E L) F A N S

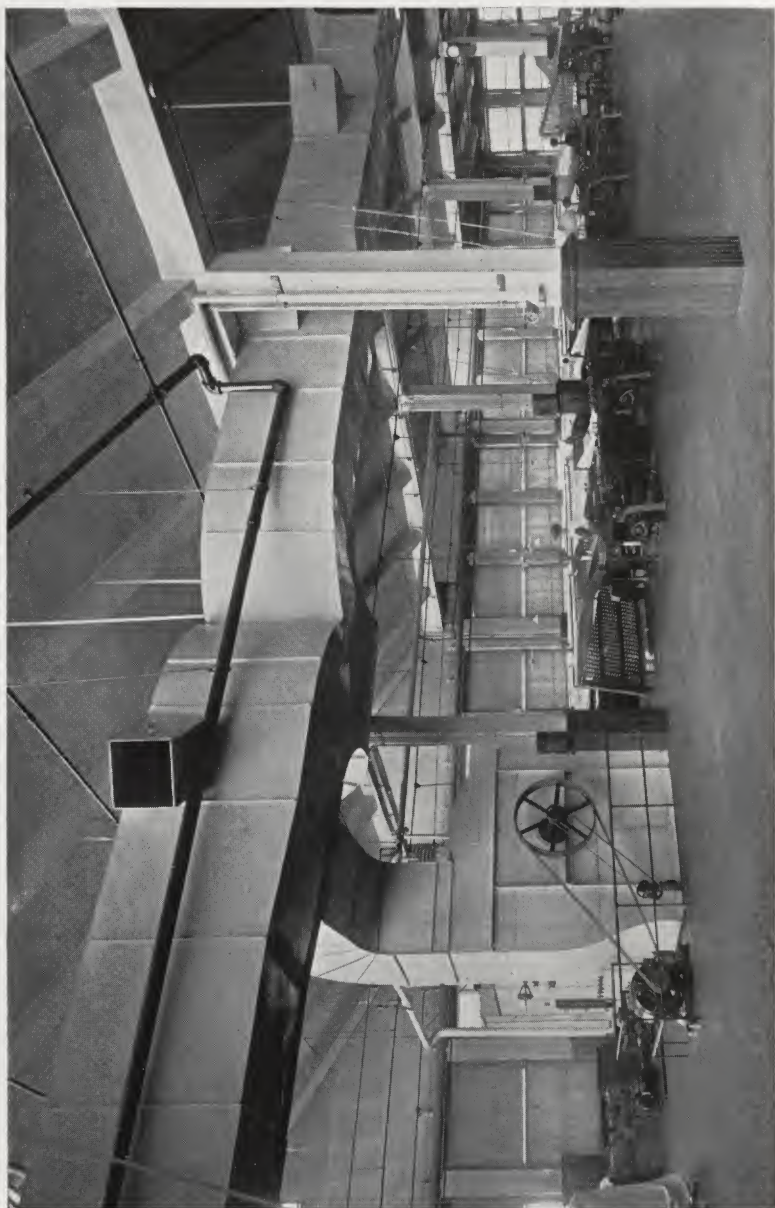
With a Planoidal fan operating at constant speed, pressure drops off when the fan is delivering more than normal rated capacity but increases when the fan is operated at less than its rated capacity. Having such a characteristic, its tendency is to deliver a more uniform quantity of air per revolution against varying resistance and its capacity is less affected by the throttling effect of closing dampers, various thicknesses of fuel bed, etc., than is the case with multiblade fans.

Planoidal fans are built both as exhausters and blowers, the construction for each being identical, except blowers have two inlets of smaller diameter than the one inlet of the exhauster and are not furnished with an inlet cone.

Double width Planoidal fans, which give twice the capacity of a single width fan, are built only as blowers with two inlets.



**Full Housing Planoidal Fan with Wheel Overhung
on Motor Shaft, Right-Hand Up Discharge**



Planoidal Fan and Carrier Humidifier at John B. Stetson Company, Philadelphia, Pa.



Buffalo Heating Apparatus at Pennsylvania Railroad Fruit Pier No. 29, New York City

CONSTRUCTION DETAILS

HOUSING

The housing is involute in form and made of heavy steel plate, strongly riveted and reinforced by both vertical and horizontal angle irons. Angle irons are also furnished around the base and the inlet cone is strengthened by an angle iron ring which is riveted to the side of the housing.

WHEEL

The blast-wheel has 5 to 12 radial blades, depending on the size of fan. Blades are of heavy steel plate riveted to T-iron spider arms which are cast into a heavy hub and are tapering in shape, wider at the inlet than the periphery. Side sheets of wheel are flanged outward at the inlet and riveted to the sides of the blades. The hub is bored, keyseated and secured by large set screws.



Standard Single Spider Wheel



Two Spider Wheel

INLET CONE

Single inlet fans, termed exhausters, have a cone tapering toward the inlet of the blast-wheel, which gradually increases the velocity of the entering air and thus reduces the loss at this point, with a corresponding saving in power. The outer edge of this inlet cone is strengthened by an angle iron ring which is riveted to the side of the fan housing.

SHAFT

The shaft is of open hearth steel designed with a large factor of safety, ground to size, keyseated and accurately finished.

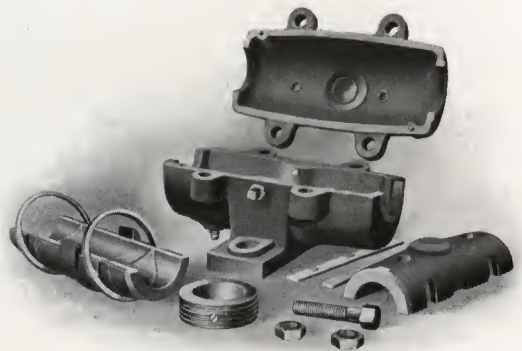
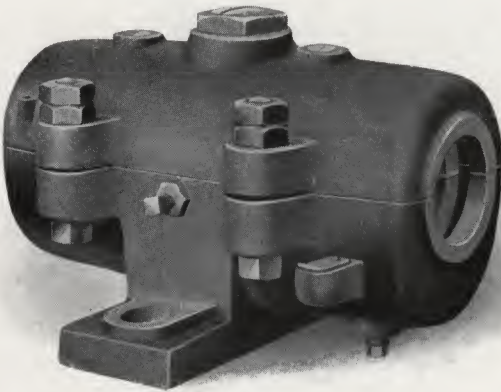
BALANCE

Fan wheels are very carefully balanced to prevent vibration, resulting in a true, quiet, smooth-running machine.

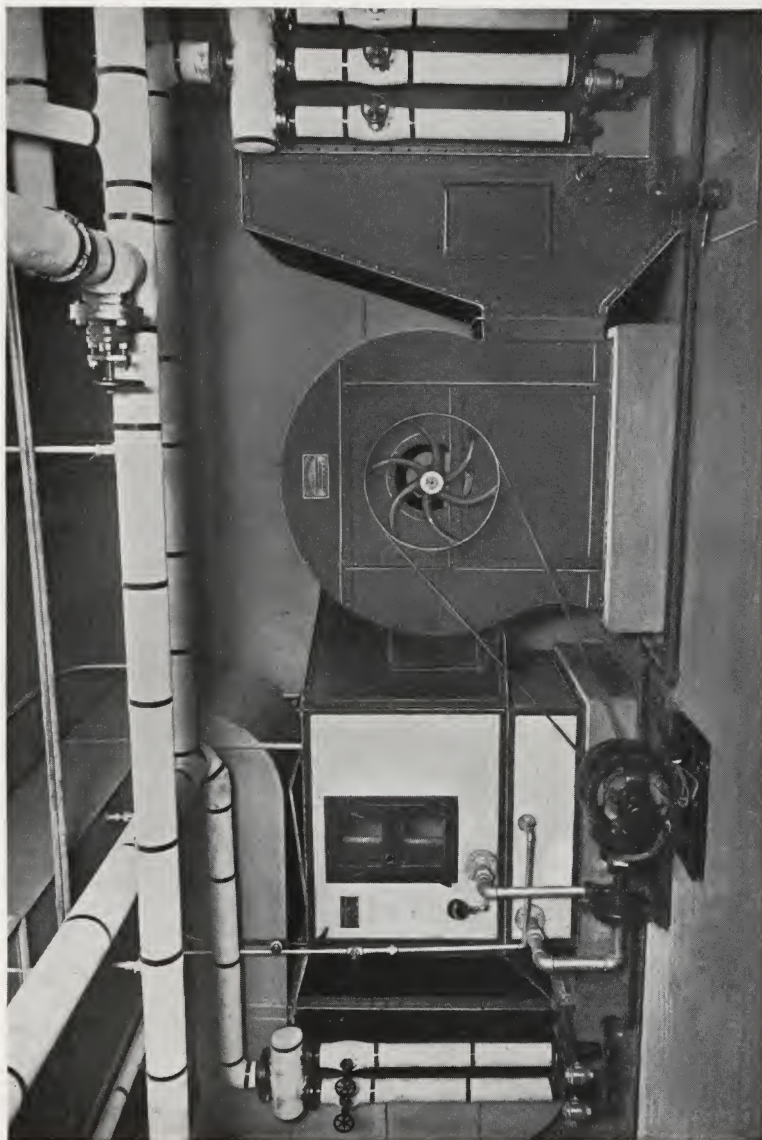
BEARINGS

The bearings are dust proof and oil tight and consist of a split sleeve lined with babbitt and completely encased in the bearing housing. The sleeve is mounted between spherical surfaces which allow the bearing to adjust itself in every direction and the housing provides a large oil reservoir in which two oil rings dip; overfilling is prevented by the position of the opening through which the oil is supplied and which also indicates the oil level.

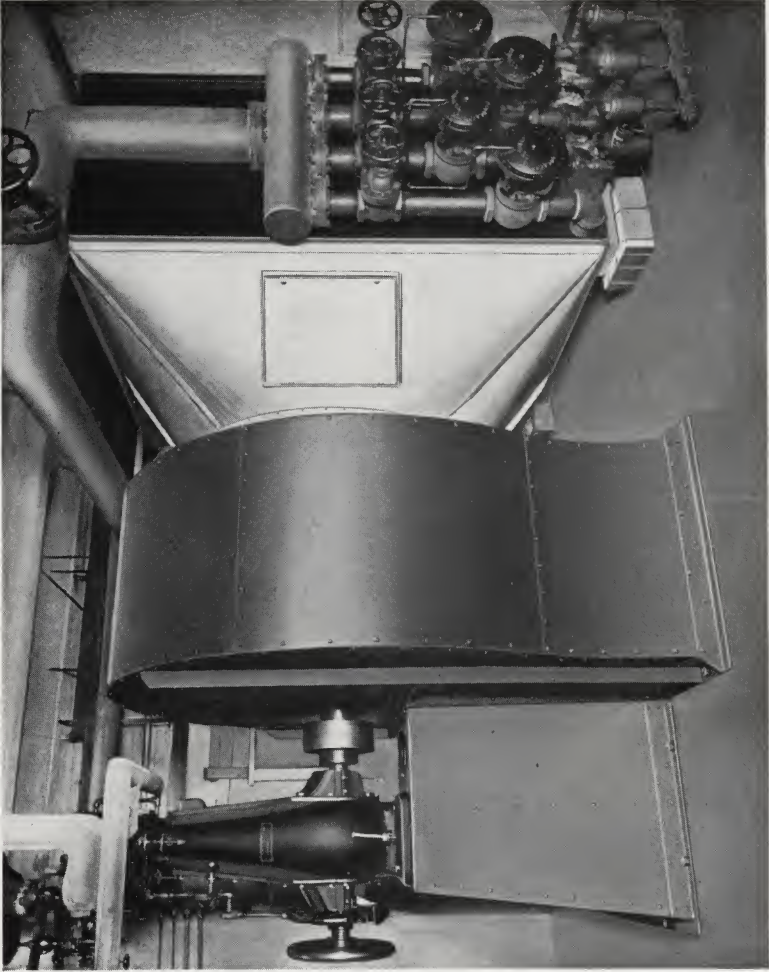
In the interest of safety the thrust collar is placed inside the housing, running against a babbitted shoulder; grooves on the outside surface of the thrust collar throw off all oil and absolutely prevent it from creeping along the shaft and being drawn into the fan.



P L A N O I D A L (T Y P E L) F A N S



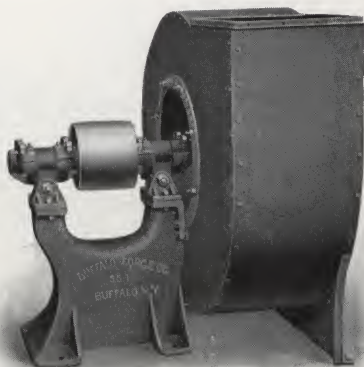
Planoidal Fan, Buffalo Heater and Carrier Air Washer at New Jersey Fire Insurance Building, Newark, N. J.



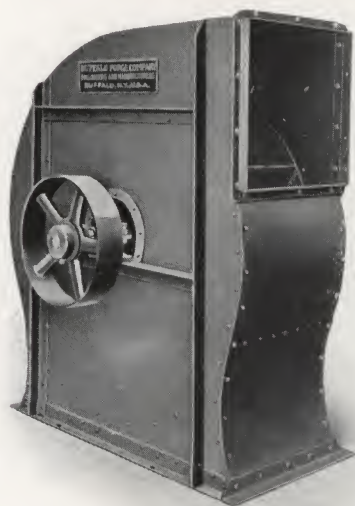
Buffalo Fan, Engine and Heater and Carrier Air Washer

PULLEY TYPE FANS

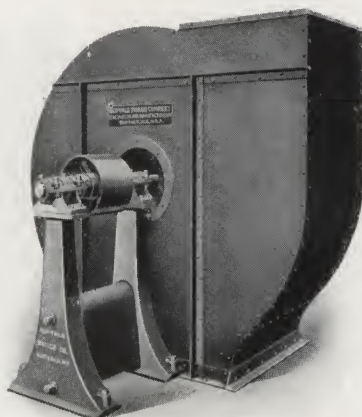
Pulley driven fans are built with either an overhung pulley or an overhung wheel as shown by the accompanying illustrations, the former being standard. With overhung pulley, the blast-wheel is mounted between bearings supported by the fan housing.



30" to 60" Full Housing Planoidal Fan, Overhung Blast-Wheel, Left-Hand Up Discharge



Full Housing Planoidal Fan, Overhung Pulley, Left-Hand Top Horizontal Discharge

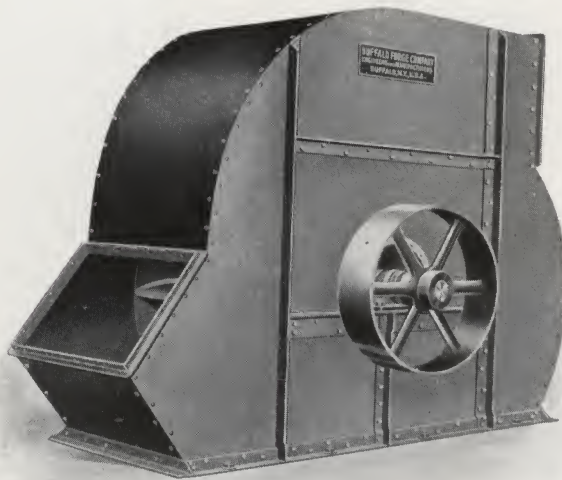


70" to 140" Full Housing Planoidal Fan, Overhung Blast-Wheel, Left-Hand Up Discharge

The overhung wheel is used where a free and unobstructed inlet is desired; in this type both bearings are on the same side of the fan; 60" and smaller fans have both bearings mounted on one pedestal, while 70" to 140" fans have two pedestals which are rigidly connected.



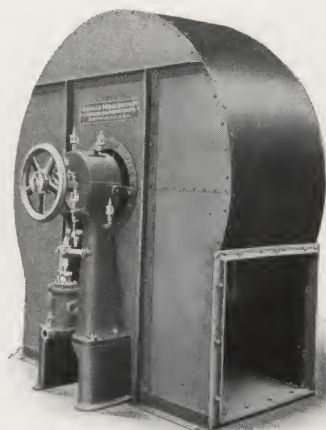
Three-quarter Housing Planoidal Fan, Overhung Pulley, Left-Hand Up Discharge



Three-quarter Housing Double Discharge Planoidal Fan, Overhung Pulley, Left-Hand Top Horizontal and Right-Hand Angular Up Discharge

DIRECT CONNECTED FANS

Planoidal Type "L" fans may be furnished either direct connected to a steam engine or to an electric motor, the engine drive conveniently permitting wide speed variation. This company has a completely equipped engine department, making no less than nine distinct types, many of which have

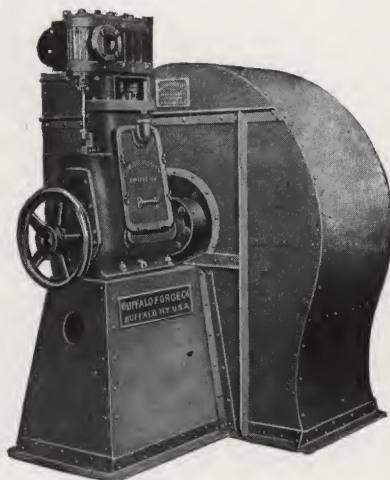


**Full Housing Planoidal Fan, Left-Hand
Bottom Horizontal Discharge and
Class "T" Engine**



**Full Housing Planoidal Fan, Left-Hand Up
Discharge and D. V. S. A. Engine**

been designed especially for fan service. When sufficient pressure is not available, or location is such that apparatus requiring minimum attention is required, motor drive affords the solution.



**Full Housing Planoidal Fan, Right-Hand
Up Discharge and D. V. D. A. Engine**

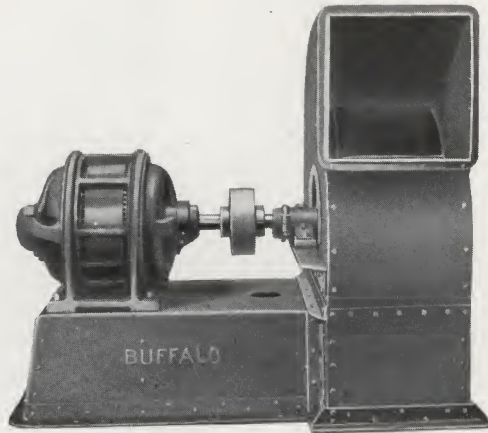
For fans direct connected to either motors or engines, a steel plate base attached to the fan housing may be used, or the fan and motor or engine mounted on separate concrete foundations.

Where separate foundations are not used the bases are rigidly attached to the fan housings and are of box construction, tapering to a broad base and finished off with heavy angle iron. The base is stiffened across the interior with steel ribs and is made with corners rounded so as to avoid an unfinished appearance.

Motor driven exhausters may have the fan-wheel overhung on the motor shaft, which is extended for this purpose, or a coupling may be used, with an outboard bearing. Flexible couplings are supplied when conditions make it advisable and require two bearings for the fan shaft.



Full Housing Planoidal Fan, Left-Hand Up Discharge and Class "O" Engine

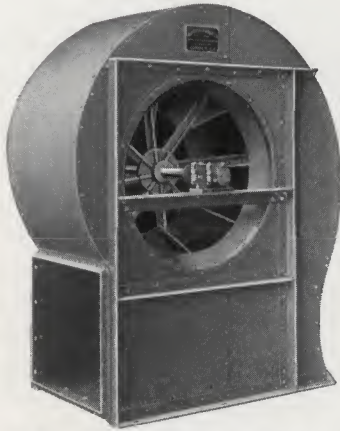


Full Housing Planoidal Fan, Left-Hand Top Horizontal Discharge and Electric Motor

STANDARD ARRANGEMENTS

In ordering fans, specify hand, discharge, type of drive, whether overhung pulley or overhung wheel is wanted, full or three-quarter housing, etc. See page 34.

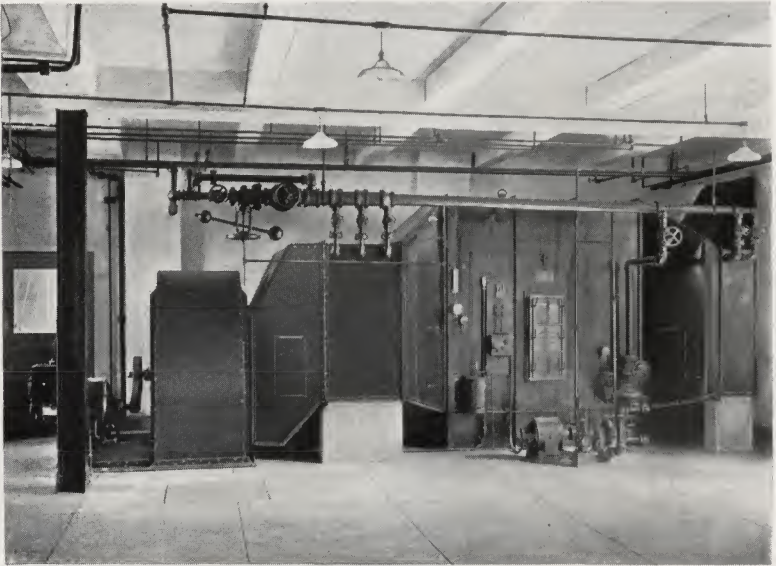
The "hand" of a fan is determined by the location of the drive side when one stands facing the outlet end of the fan. If the pulley, motor or engine is on the left, it is called "left hand"; if on the right, "right hand."



**Full Housing Planoidal Fan, Left-Hand
Bottom Horizontal Discharge, for
Overhung Pulley or Direct
Connection**

Dimension tables on pages 37 to 47 show standard positions of discharge openings but special position of openings can be furnished if desired and housing can be constructed with two outlets to discharge air in different directions.

B U F F A L O F O R G E C O M P A N Y



Buffalo Fan and Carrier Air Washer
Installed in Physical Laboratory of the Bethlehem Steel Company



Buffalo Mine Ventilating Fan



Beech-Nut Packing Company, Canajoharie, N. Y. Ducts and Diffusers for Air Supply, Tempered, Washed and Moistened by Buffalo Fan System Heating Apparatus and Carrier Air Washers

CAPACITIES OF PLANOIDAL (TYPE L) EXHAUSTERS AT TEMPERATURE OF 70° F. AND 29.92 INCHES BAROMETER

Size	Diameter Blas- Wheel	Area of Outlet Square Feet	1/2" Total Pressure or 0.288 Oz.			5/8" Total Pressure or 0.360 Oz.			3/4" Total Pressure or 0.433 Oz.			7/8" Total Pressure or 0.505 Oz.		
			R.P.M.	Vol.	H. P.	R.P.M.	Vol.	H. P.	R.P.M.	Vol.	H. P.	R.P.M.	Vol.	H. P.
30	19 1/4"	0.80	620	1030	0.18	693	1150	0.25	760	1260	0.32	819	1350	0.41
35	22 1/2"	1.08	532	1400	0.24	594	1560	0.34	651	1710	0.44	702	1840	0.55
40	25 3/4"	1.41	465	1820	0.31	520	2040	0.44	570	2230	0.58	614	2410	0.72
45	28 1/8"	1.81	414	2010	0.40	462	2580	0.55	506	2820	0.73	546	3050	0.91
50	32 1/8"	2.22	372	2850	0.49	415	3180	0.68	456	3490	0.90	492	3760	1.13
55	35 3/8"	2.68	338	3440	0.59	378	3850	0.83	414	4220	1.09	447	4550	1.37
60	38 1/2"	3.21	310	4100	0.71	347	4580	0.98	380	5020	1.30	410	5410	1.63
70	45 1/2"	4.34	266	5580	0.96	297	6230	1.34	326	6830	1.76	351	7370	2.21
80	51 3/8"	5.64	233	7290	1.25	260	8140	1.75	285	8920	2.30	307	9620	2.89
90	57 7/8"	7.22	207	9220	1.59	231	10270	2.21	253	11290	2.92	273	12180	3.66
100	64 1/4"	8.88	186	11380	1.96	208	12720	2.73	228	13940	3.60	246	15040	4.51
110	70 3/4"	10.69	169	13770	2.37	189	15390	3.30	207	16870	4.36	224	18190	5.46
120	77 1/4"	12.84	155	16390	2.82	173	18320	3.90	190	20080	5.18	205	21650	6.50
130	83 1/2"	15.02	143	19240	3.31	160	21500	4.61	175	23560	6.08	189	25410	7.63
140	90"	17.36	133	22310	3.84	149	24930	5.35	163	27330	7.05	176	29480	8.84
150	96 1/2"	19.88	124	25610	4.41	139	28620	6.14	152	31370	8.10	164	33830	10.20
160	103 1/4"	22.56	116	29140	5.01	130	32560	6.99	142	35690	9.21	154	38500	11.60
170	109 1/4"	25.63	110	32900	5.66	122	36760	7.89	134	40290	10.40	145	43460	13.00
180	115 3/4"	28.67	103	36880	6.34	116	41200	8.84	127	45170	11.70	137	48720	14.60
190	122 1/4"	31.88	98	41100	7.07	110	45930	9.86	120	50330	12.90	129	54300	16.30
200	128 1/2"	35.50	93	45540	7.83	104	50880	10.90	114	55760	14.40	123	60150	18.10
210	135"	38.93	89	50200	8.64	99	56100	12.00	109	61480	15.90	117	66310	19.90
220	141 1/2"	42.52	85	55100	9.48	95	61550	13.20	104	67480	17.40	112	72780	21.90
230	148"	46.70	81	60210	10.40	90	67280	14.40	99	73750	19.00	107	79540	23.90

Static Pressure is 79% of the Rated Total Pressure

For same capacity and pressure Planoidal (Type L) Blowers with two inlets will run about 3% slower and require about 8% less horsepower than given above

CAPACITIES OF PLANOIDAL (TYPE L) EXHAUSTERS AT TEMPERATURE OF 70° F. AND 29.92 INCHES BAROMETER

Size	Diameter Blast-Wheel	Area of Outlet Square Feet	1" Total Pressure or 0.577 Oz.			1 1/4" Total Pressure or 0.721 Oz.			1 1/2" Total Pressure or 0.865 Oz.			1 3/4" Total Pressure or 1.010 Oz.		
			R.P.M.	Vol.	H. P.	R.P.M.	Vol.	H. P.	R.P.M.	Vol.	H. P.	R.P.M.	Vol.	H. P.
30	19 1/4"	0.80	877	1450	0.50	981	1620	0.70	1074	1770	0.91	1160	1920	1.15
35	22 1/2"	1.08	752	1970	0.68	840	2200	0.95	921	2410	1.25	995	2610	1.57
40	25 3/4"	1.41	658	2580	0.89	735	2880	1.24	806	3150	1.63	870	3410	2.05
45	28 7/8"	1.81	585	3260	1.12	654	3640	1.57	716	3990	2.06	774	4310	2.60
50	32 1/8"	2.22	526	4030	1.38	588	4500	1.94	645	4930	2.54	696	5330	3.21
55	35 3/8"	2.68	478	4870	1.68	535	5440	2.34	586	5960	3.08	633	6440	3.88
60	38 1/2"	3.21	439	5800	1.99	490	6480	2.79	537	7100	3.66	580	7670	4.62
70	45"	4.34	376	7890	2.71	420	8820	3.79	460	9650	4.99	497	10450	6.28
80	51 3/8"	5.64	329	10300	3.54	368	11520	4.95	403	12620	6.51	435	13630	8.21
90	57 7/8"	7.22	292	13040	4.49	327	14580	6.27	358	15970	8.24	387	17250	10.40
100	64 1/4"	8.88	263	16100	5.54	294	18000	7.74	322	19720	10.20	348	21300	12.80
110	70 3/4"	10.69	239	19480	6.70	268	21780	9.36	293	23860	12.30	316	25770	15.50
120	77 1/4"	12.84	219	23180	7.97	245	25920	11.20	269	28390	14.70	290	30670	18.50
130	83 1/2"	15.02	202	27210	9.36	226	30420	13.10	248	33320	17.20	268	36000	21.70
140	90"	17.36	188	31560	10.90	210	35280	15.20	230	38650	19.90	249	41750	25.10
150	96 1/2"	19.88	175	36230	12.50	196	40500	17.40	215	44360	22.90	232	47930	28.90
160	103"	22.56	164	41220	14.20	184	46080	19.80	201	50470	26.00	218	54510	32.80
170	109 1/4"	25.63	155	46530	16.00	173	52020	22.40	190	56980	29.40	205	61560	37.00
180	115 3/4"	28.67	146	52160	17.90	164	58320	25.10	179	63880	33.00	194	69000	41.50
190	122 3/4"	31.88	139	58120	20.00	155	64980	27.90	170	71180	36.70	183	76900	46.30
200	128 1/2"	35.50	132	64400	22.20	147	72000	31.00	161	78870	40.70	174	85200	51.30
210	135"	38.93	125	71000	24.40	140	79380	34.10	154	86950	44.90	166	93930	56.50
220	141 1/2"	42.52	120	77920	26.80	134	87120	37.50	147	95430	49.20	158	103080	62.10
230	148"	46.70	114	85170	29.30	128	95220	40.90	140	104300	53.80	151	112680	67.80

Static Pressure is 79% of the Rated Total Pressure

For same capacity and pressure Planoidal (Type L) Blowers with two inlets will run about 3% slower and require about 8% less horsepower than given above

CAPACITIES OF PLANOIDAL (TYPE L) EXHAUSTERS AT TEMPERATURE OF 70° F. AND 29.92 INCHES BAROMETER

Size	Diameter Blast- Wheel	Area of Outlet Square Feet	2" Total Pressure or 1.154 Oz.			2½" Total Pressure or 1.442 Oz.			3" Total Pressure or 1.734 Oz.			3½" Total Pressure or 2.019 Oz.		
			R. P. M.	Vol.	H. P.	R. P. M.	Vol.	H. P.	R. P. M.	Vol.	H. P.	R. P. M.	Vol.	H. P.
30	19¼"	0.80	1240	2050	1.41	1387	2290	1.97	1519	2510	2.59	1641	2710	3.26
35	22½"	1.08	1064	2790	1.92	1189	3120	2.68	1302	3420	3.52	1406	3690	4.44
40	25¾"	1.41	930	3630	2.51	1040	4070	3.50	1139	4460	4.60	1230	4820	5.80
45	28⅞"	1.81	827	4610	3.17	924	5160	4.43	1013	5650	5.83	1094	6100	7.34
50	32⅞"	2.22	744	5690	3.92	832	6360	5.47	912	6970	7.19	984	7530	9.06
55	35⅝"	2.68	676	6890	4.74	756	7700	6.62	829	8440	8.70	895	9110	11.00
60	38½"	3.21	620	8200	5.64	693	9160	7.88	760	10040	10.40	820	10840	13.10
70	45"	4.34	532	11540	7.67	594	12470	10.70	651	13660	14.10	703	14760	17.80
80	51⅜"	5.64	465	14570	10.00	520	16290	14.00	570	17850	18.40	615	19280	23.20
90	57⅞"	7.22	413	18440	12.70	462	20600	17.70	506	22590	23.30	547	24400	29.40
100	64½"	8.88	372	22770	15.70	416	25460	21.90	456	27900	28.80	492	30120	36.30
110	70¾"	10.69	338	27540	19.00	378	30800	26.50	414	33740	34.80	448	36450	43.90
120	77¼"	12.84	310	32780	22.60	347	36660	31.50	380	40650	41.40	410	43380	52.20
130	83½"	15.02	286	38470	26.50	320	43020	37.00	351	47100	48.60	379	50900	61.30
140	90"	17.36	266	44630	30.70	297	49890	42.90	326	54750	56.40	352	59040	71.00
150	96½"	19.88	248	51220	35.30	277	57260	49.30	304	62740	64.80	328	67770	81.60
160	103"	22.56	233	58270	40.10	260	65170	56.00	285	71370	73.60	308	77110	92.80
170	109¼"	25.63	219	65790	45.30	245	73570	63.30	268	80590	83.10	290	87060	104.80
180	115"	28.67	207	73760	50.70	231	82480	70.90	253	90340	93.20	274	97600	117.50
190	122¼"	31.88	196	82180	56.50	219	91900	79.00	240	100670	103.40	259	108740	130.90
200	128½"	35.50	186	91060	62.70	208	101800	87.60	228	111540	115.10	246	120490	145.00
210	135"	38.93	177	100390	69.10	198	112270	96.50	217	122980	126.90	234	132830	159.90
220	141½"	42.52	169	110170	75.80	189	123200	105.90	207	134970	139.30	224	145780	175.50
230	148"	46.70	162	120420	82.90	181	134670	115.80	198	147510	152.20	214	159310	191.80

Static Pressure is 79% of the Rated Total Pressure

For same capacity and pressure Planoidal (Type L) Blowers with two inlets will run about 3% slower and require about 8% less horsepower than given above

CAPACITIES OF PLANOIDAL (TYPE L) EXHAUSTERS AT TEMPERATURE OF 70° F. AND 29.92 INCHES BAROMETER

Size	3/8" Static Pressure or 0.217 Oz.			1/2" Static Pressure or 0.288 Oz.			5/8" Static Pressure or 0.360 Oz.			3/4" Static Pressure or 0.433 Oz.			7/8" Static Pressure or 0.505 Oz.		
	R. P. M.	Vol.	H. P.	R. P. M.	Vol.	H. P.	R. P. M.	Vol.	H. P.	R. P. M.	Vol.	H. P.	R. P. M.	Vol.	H. P.
30	1.66	606	0.16	700	1160	0.25	783	1300	0.35	857	1420	0.46	925	1535	0.58
35	2.61	520	0.22	601	1570	0.34	672	1755	0.47	736	1925	0.62	795	2075	0.79
40	3.93	456	0.29	526	2065	0.45	588	2310	0.62	644	2530	0.82	695	2730	1.03
45	5.57	404	0.37	467	2600	0.56	522	2910	0.79	571	3185	1.03	617	3440	1.30
50	7.65	364	0.45	421	3220	0.70	470	3600	0.97	515	3940	1.28	556	4260	1.61
55	10.18	331	0.55	382	3890	0.84	427	4350	1.18	468	4765	1.55	505	5140	1.95
60	13.25	303	0.65	350	4630	1.00	391	5180	1.40	429	5675	1.84	463	6125	2.32
70	21.00	260	0.89	301	6320	1.36	336	7060	1.91	368	7730	2.51	398	8350	3.16
80	31.38	227	1.16	262	8230	1.78	293	9200	2.49	321	10080	3.28	347	10880	4.13
90	44.60	202	1.47	233	10410	2.25	261	11640	3.15	286	12750	4.15	309	13780	5.22
100	61.30	182	1.81	210	12880	2.78	235	14400	3.89	257	15750	5.12	278	17020	6.44
110	81.50	165	2.19	191	15550	3.37	214	17400	4.71	234	19100	6.19	253	20600	7.80
120	105.60	152	2.62	175	18530	4.04	196	20700	5.63	215	22700	7.40	232	24500	9.35
130	134.00	140	3.05	161	21600	4.70	180	24150	6.57	198	26450	8.64	213	28600	10.90
140	168.00	130	3.54	150	25200	5.45	168	28200	7.60	184	30850	10.00	198	33350	12.60
150	206.50	121	4.04	140	28950	6.21	157	32350	8.70	171	35400	11.40	185	38250	14.40
160	249.50	114	4.61	132	32800	7.08	147	36700	9.93	161	40200	13.05	174	43400	16.45
170	300.00	107	5.23	124	37150	8.04	138	41600	11.25	152	45500	14.75	164	49150	18.65
180	357.50	101	5.86	117	41700	9.00	130	46700	12.60	143	51100	16.55	154	55200	20.85
190	420.00	96	6.51	110	46300	10.00	123	51800	14.00	135	56700	18.40	146	61250	23.20
200	491.50	91	7.22	105	51500	11.10	117	57600	15.55	128	63100	20.45	138	68200	25.75
210	568.50	86	7.95	100	56650	12.20	111	63400	17.10	122	69400	22.50	132	75000	28.30
220	651.00	83	8.75	96	62150	13.45	107	69500	18.85	117	76100	24.75	126	82200	31.15
230	745.00	79	9.54	91	68000	14.70	102	75200	20.55	112	83300	27.00	121	89900	34.00

Total Pressure is 126% of the Rated Static Pressure

For same capacity and pressure Planoidal (Type L) Blowers with two inlets will run about 3% slower and require about 8% less horsepower than given above

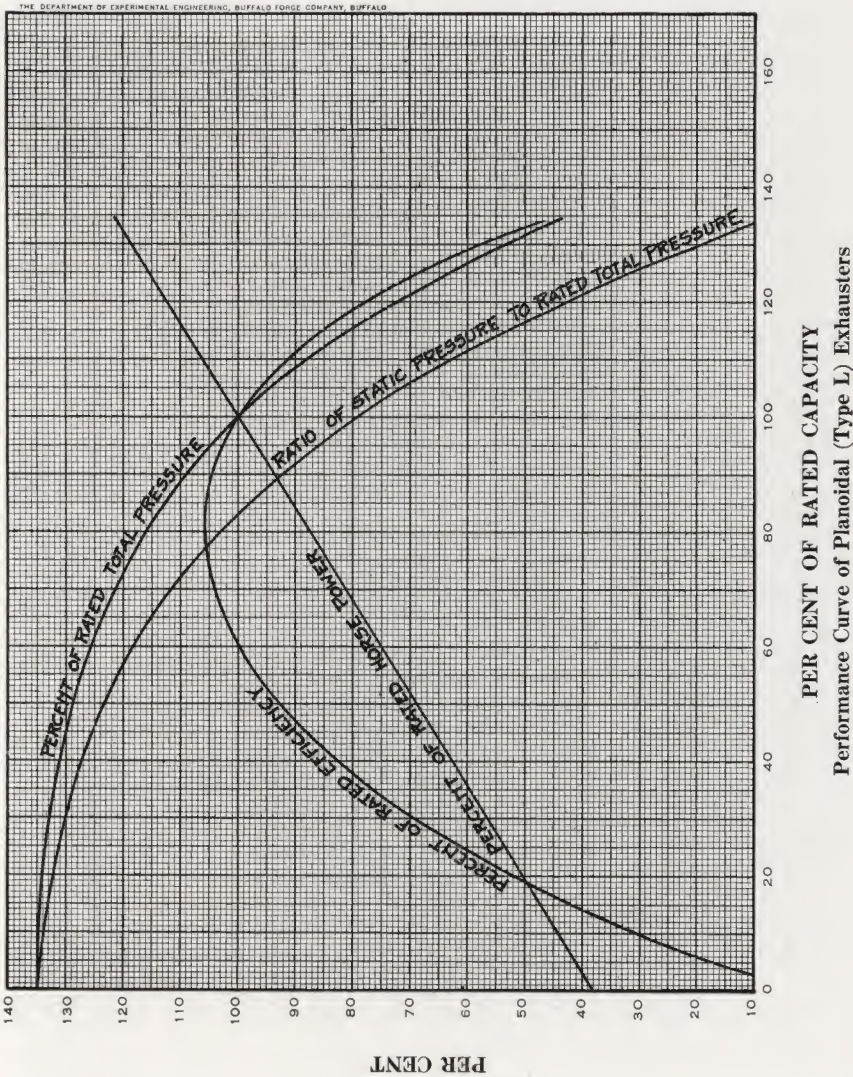
CAPACITIES OF PLANOIDAL (TYPE L) EXHAUSTERS AT TEMPERATURE OF 70° F. AND 29.92 INCHES BAROMETER

Size	A. P. M. per R. P. M.	1" Static Pressure or 0.577 Oz.			1 1/4" Static Pressure or 0.721 Oz.			1 1/2" Static Pressure or 0.865 Oz.			1 3/4" Static Pressure or 1.010 Oz.			2" Static Pressure or 1.154 Oz.		
		R. P. M.	Vol.	H. P.	R. P. M.	Vol.	H. P.	R. P. M.	Vol.	H. P.	R. P. M.	Vol.	H. P.	R. P. M.	Vol.	H. P.
30	1.66	990	1640	0.71	1110	1830	0.99	1212	2010	1.31	1310	2170	1.64	1400	2320	2.01
35	2.61	850	2220	0.96	950	2480	1.34	1041	2720	1.76	1125	2940	2.22	1200	3140	2.71
40	3.93	744	2920	1.26	831	3260	1.76	912	3580	2.32	985	3860	2.91	1050	4135	3.56
45	5.57	660	3680	1.59	738	4110	2.22	809	4510	2.93	874	4870	3.68	934	5210	4.50
50	7.65	595	4550	1.97	665	5080	2.75	729	5580	3.63	787	6020	4.55	842	6440	5.57
55	10.18	540	5500	2.38	604	6150	3.33	662	6740	4.38	715	7280	5.51	765	7780	6.73
60	13.25	495	6550	2.83	554	7320	3.96	606	8030	5.21	655	8670	6.55	700	9260	8.00
70	21.00	425	8930	3.86	475	9990	5.40	521	10920	7.11	562	11810	8.93	601	12630	10.91
80	31.38	371	11630	5.04	415	13000	7.05	454	14250	9.29	491	15400	11.65	525	16450	14.26
90	44.60	330	14730	6.38	369	16480	8.93	404	18050	11.72	437	19500	14.74	467	20850	18.05
100	61.30	297	18200	7.87	332	20350	11.00	364	22300	14.45	393	24080	18.20	420	25750	22.25
110	81.50	270	22000	9.53	302	24600	13.35	331	26950	17.50	357	29100	22.05	382	31100	26.95
120	105.60	248	26200	11.40	277	29300	15.95	304	32080	21.00	328	34650	26.40	351	37050	32.21
130	134.00	228	30550	13.30	255	34150	18.60	279	37410	24.50	302	40400	30.75	323	43250	37.60
140	168.00	212	35650	15.40	237	39850	21.55	260	43700	28.40	281	47200	35.60	300	50400	43.60
150	206.50	198	40900	17.60	221	45750	24.60	242	50150	32.45	262	54150	40.70	280	57900	49.75
160	249.50	186	46450	20.10	208	51850	28.15	228	56900	37.05	246	61400	46.50	263	65700	56.80
170	300.00	175	52550	22.75	196	58800	31.80	214	64400	41.90	232	69500	52.60	248	74300	64.30
180	357.50	165	59000	25.50	184	66000	35.70	202	72250	46.15	218	78100	59.00	234	83500	72.15
190	420.00	156	65500	28.35	174	73250	39.65	191	80250	52.25	206	86700	65.55	221	92650	80.15
200	491.50	148	72850	31.45	165	81450	44.00	181	89200	57.95	196	96400	72.75	209	103000	89.00
210	568.50	141	80150	34.60	158	89550	48.50	173	98200	63.75	187	106000	80.00	199	113300	97.80
220	651.00	135	87900	38.10	151	98250	53.35	165	107800	70.20	178	116200	88.15	191	124300	107.80
230	745.00	129	96150	41.55	144	107500	58.25	158	117850	76.50	170	125800	96.10	183	136000	117.40

Total Pressure is 126% of the Rated Static Pressure

For same capacity and pressure Planoidal (Type L) Blowers with two inlets will run about 3% slower and require about 8% less horsepower than given above

P L A N O I D A L (T Y P E L) F A N S

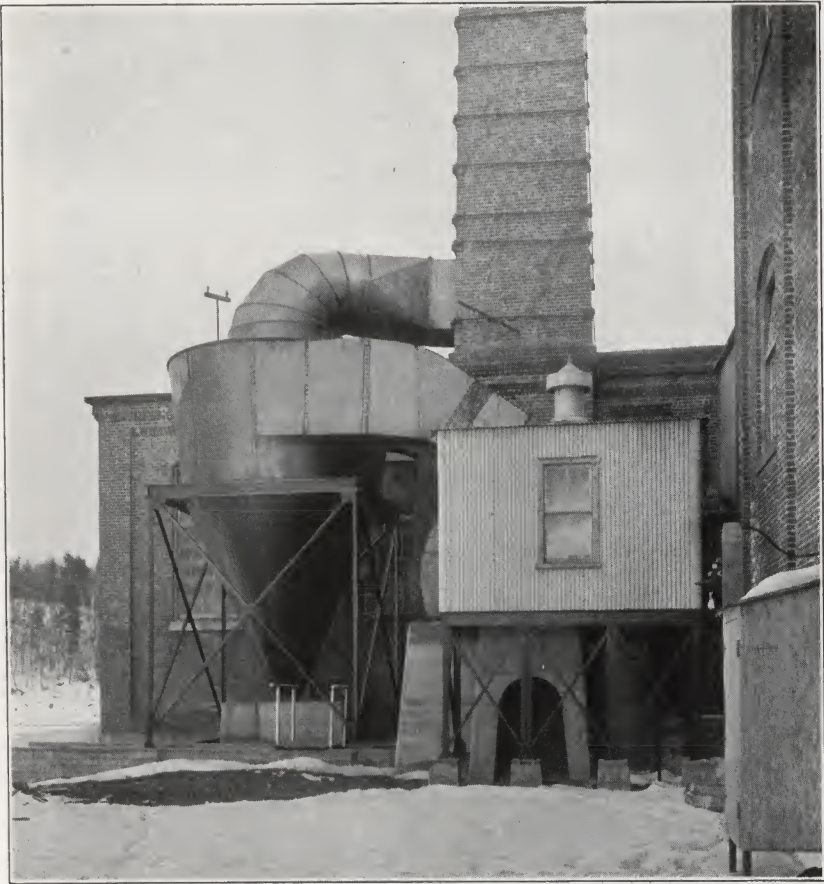


B U F F A L O F O R G E C O M P A N Y

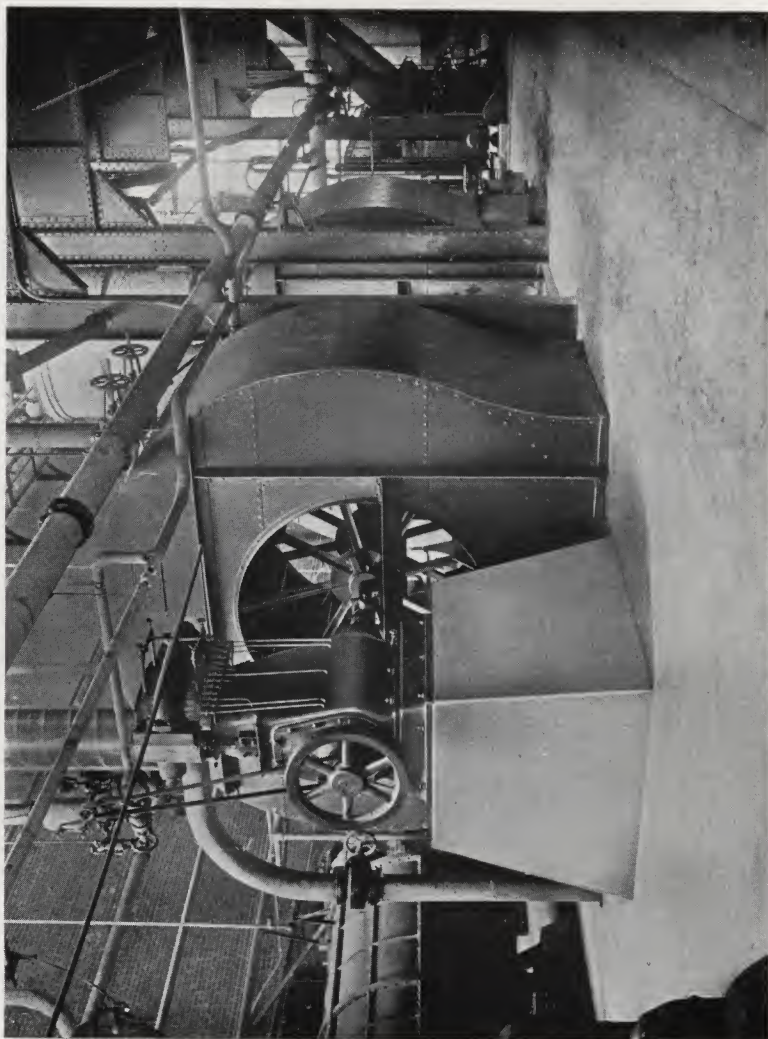
CORRESPONDING PRESSURES AND VELOCITIES OF DRY AIR AT 70° AND 29.92 INCHES BAROMETER

Inches of Water	Ounces per Sq. In.	Velocity Ft. per Min.	Inches of Water	Ounces per Sq. In.	Velocity Ft. per Min.
.05	.0289	896	4.77	2.750	8745
.10	.0577	1266	5.00	2.884	8943
.20	.1154	1791	5.20	3.000	9134
.25	.1443	2003	5.50	3.172	9392
.30	.1730	2193	6.00	3.460	9810
.40	.2308	2533	6.07	3.500	9864
.43	.2500	2637	6.50	3.749	10210
.50	.2884	2832	6.94	4.000	10545
.60	.3460	3102	7.00	4.037	10595
.70	.4037	3351	7.50	4.326	10968
.75	.4326	3468	7.80	4.500	11187
.80	.4614	3582	8.00	4.614	11328
.87	.5000	3729	8.67	5.000	11792
.90	.5190	3800	9.00	5.190	12015
1.00	.5768	4005	9.54	5.500	12367
1.25	.7209	4478	10.00	5.768	12665
1.30	.7500	4566	10.40	6.000	12915
1.50	.8650	4905	11.00	6.344	13282
1.73	1.0000	5273	11.27	6.500	13445
1.75	1.0092	5298	12.00	6.921	13875
2.00	1.1535	5664	12.14	7.000	13950
2.17	1.2500	5895	13.00	7.497	14440
2.25	1.2975	6007	13.87	8.000	14913
2.50	1.4418	6332	14.00	8.074	14985
2.60	1.5000	6457	15.00	8.650	15510
2.75	1.5860	6641	15.61	9.000	15820
3.00	1.7300	6937	16.00	9.227	16020
3.03	1.7500	6976	17.00	9.805	16513
3.25	1.8740	7220	17.34	10.000	16675
3.47	2.0000	7457	18.00	10.380	16990
3.50	2.0185	7492	19.00	10.960	17456
3.75	2.1630	7756	19.07	11.000	17488
3.90	2.2500	7910	20.00	11.535	17910
4.00	2.3070	8010	20.81	12.000	18265
4.25	2.4510	8256	22.54	13.000	19012
4.34	2.5000	8337	24.28	14.000	19730
4.50	2.5950	8496	26.01	15.000	20420
4.75	2.7395	8729	27.74	16.000	21090

P L A N O I D A L (T Y P E L) F A N S



150" Type "L" Induced Draft Fan in Power Plant of Hollingsworth & Whitney, Madison, Maine.
Four boilers burn bark and refuse from the Pulp Mill and this fan with direct connected engine discharges the gases into the stack through the spark arrester of heavy steel plate. This reduces the fire-risk



Planoidal Blowers for Forced Draft in Lehigh Valley Railroad Power House, Sayre, Pa.

BUFFALO ENGINES FOR FAN SERVICE

A brief identification of types and the service for which each is adapted will prevent improper selection of engines for driving fans. The following schedule shows a sufficient variety of designs to cover any requirements.

HORIZONTAL CENTER CRANK HIGH PRESSURE ENGINES are of the very highest grade and finish. Class "A" engines run in oil with splash lubrication and enclosed dust-proof oil-tight crank case. Class "B" are open engines. Both have forged crank-shaft, removable main bearing liners, forged connecting rod and all bearings adjustable. Furnished either with or without cast iron subbase. Suitable for the best class of heating and ventilating work.

CLASS "A" AND "B" LOW PRESSURE ENGINES:

Our horizontal center crank engines are built with cylinders proportioned for steam pressures of 15 to 30 pounds usually carried in low pressure heating plants. Otherwise identical with engines built for high steam pressures.

HORIZONTAL SIDE CRANK ENGINES:

To suit the preference of some engineers, we build a complete line of engines for high and low steam pressures of the side crank type, with features of design which are otherwise identical with the horizontal center crank engines. Class "A" engines are enclosed with splash lubrication. Class "B" are open frame.

CLASS "N" HORIZONTAL SIDE CRANK ENGINES are specially designed for driving fans in commercial applications, as for factory heating and ventilating plants, drying outfits, etc. at ordinary speeds. The design is strong, substantial and the engine simple and accessible, with balanced piston valve, removable babbitt liners in main bearings, bored crosshead guides and adjustable brasses. A well built and economical engine with greater attention paid to design than to high finish.

VERTICAL ENGINES:

Built from 4" to 12" stroke, of the same design and with many parts interchangeable with horizontal Class "A" and Class "B" engines. Class "A" are enclosed self-oiling and dust-proof engines. Class "B" are open frame.

Large bore cylinders for low steam pressures make these engines particularly adapted for driving the smaller sizes of fans in schools and public buildings. Appearance and finish suitable for any engine room.

CLASS "O" VERTICAL ENGINES are open frame, extremely accessible for adjustment and with extra large bearings throughout. This is a heavier engine than Class "A" and "B" verticals and more accessible for adjustment but without much bright work. Recommended for factory heating, ventilating and drying, or mechanical draft installations, driving centrifugal pumps, etc.

CLASS "T" VERTICAL:

A special type, perfected some years ago and still popular for driving full housing fans in the smaller sizes. It occupies very limited space and cannot be improved on for all around service.

DOUBLE CYLINDER VERTICAL ENGINES:

For direct connection to high speed fans for forced draft or similar installations. Built in two types, single acting D. V. S. A. and double acting D. V. D. A. Single acting engines in sizes suitable for 40" to 80" Type "L" fans and double acting for 70" to 140" Type "L." These engines were designed for forced draft on ship-board and wherever limited space requires the use of a high speed reliable fan engine.

The size of engines recommended under ordinary conditions for various fans will be found in tables on pages 32 and 33.

B U F F A L O F O R G E C O M P A N Y

PLANOIDAL (TYPE L) EXHAUSTERS WITH PROPER COMBINATIONS OF HEATERS AND ENGINES FOR PUBLIC BUILDINGS AND INDUSTRIAL INSTALLATIONS

Size of Fan	Cubic Feet of Air per Min.		Buffalo Standard Heater					Engine Size	
	1 Inch Total Press.	2 Inch Total Press.	Arrangement	Style	Size		Clear Area Sq. Ft.	Low Pressure Steam	High Pressure Steam
50	4030	5690	Single	R.O.A.	3'-0" x	3'- 4"	4.4		
55	4870	6890	Single	R.O.A.	3'-0" x	3'-10"	5.2	}	3x3½I
					3'-0" x	4'- 4"	6.0		
60	5800	8200	Single	R.O.A.	3'-0" x	4'- 4"	6.0	}	4x3½I
					3'-0" x	4'-10"	6.8		
					3'-0" x	5'- 4"	7.6		
70	7890	11540	Single	R.O.A.	3'-0" x	5'- 4"	7.6	}	4x3½I
					3'-0" x	5'-10"	8.4		
					4'-0" x	5'- 4"	9.7		
80	10300	14570	Single	R.O.A.	4'-0" x	5'-10"	10.7	}	5 x5 4½x5 I
					4'-0" x	6'- 4"	11.2		
					4'-0" x	6'-10"	12.6		
					4'-6" x	5'-10"	12.1		
					4'-6" x	6'- 4"	13.1		
90	13040	18440	Single	R.O.A.	4'-6" x	6'- 4"	13.1	}	5 x5 4½x5 I
					4'-6" x	6'-10"	14.2		
					4'-6" x	7'- 4"	15.3		
					5'-0" x	6'- 4"	14.1		
					5'-0" x	6'-10"	15.4		
100	16100	22770	Single	R.O.A.	5'-0" x	7'- 4"	16.6	}	6 x6 4½x5 I 5 x10 N
					5'-0" x	7'-10"	17.7		
					6'-0" x	7'- 4"	19.8		
					6'-0" x	7'-10"	21.3		
110	19480	27540	Single	R.O.A.	6'-0" x	7'-10"	21.3	}	7 x7 6 x8 6½x8 I 5 x10 N
					6'-0" x	8'- 4"	22.7		
					6'-0" x	8'-10"	24.2		
				R.B.	7'-0" x	7'- 4"	23.6		
					7'-0" x	7'-10"	25.4		
120	23180	32780	Single	R.O.A.	6'-0" x	8'- 4"	22.7	}	7 x7 8 x8 6½x8 I 6 x10 N
					6'-0" x	8'-10"	24.2		
				R.B.	7'-0" x	7'- 4"	23.6		
					7'-0" x	7'-10"	25.4		
					7'-0" x	8'- 4"	27.2		
130	27210	38470	Single	R.B.	7'-0" x	8'-10"	29.0	}	8 x8 6½x8 I 6 x10 N
					7'-0" x	8'- 4"	27.2		
					7'-0" x	8'-10"	29.0		
					7'-0" x	9'- 4"	30.7		
					7'-0" x	9'-10"	32.5		
140	31560	44630	Single	R.B.	8'-6" x	8'- 4"	33.2	}	8 x8 8 x10 7½x9 I 7 x12 N
					7'-0" x	9'- 4"	30.7		
					7'-0" x	9'-10"	32.5		
					8'-6" x	8'- 4"	33.2		
					8'-6" x	8'-10"	35.3		
					8'-6" x	9'- 4"	37.6		
					8'-6" x	9'-10"	39.8		
					8'-6" x	10'- 4"	41.8		
					8'-6" x	10'-10"	44.0		
					9'-6" x	8'- 4"	36.7		
					9'-6" x	8'-10"	39.0		

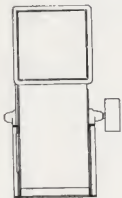
P L A N O I D A L (T Y P E L) F A N S

PLANOIDAL (TYPE L) EXHAUSTERS WITH PROPER COMBINATIONS OF HEATERS AND ENGINES FOR PUBLIC BUILDINGS AND INDUSTRIAL INSTALLATIONS

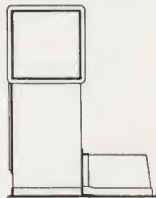
Size of Fan	Cubic Feet of Air per Min.		Buffalo Standard Heater				Engine Size	
	1 Inch Total Press.	2 Inch Total Press.	Arrangement	Style	Size	Clear Area Sq. Ft.	Low Pressure Steam	High Pressure Steam
150	36230	51220	Single	R.B.	8'-6" x 8'-10"	35.3	15x8	10 x8 8 x10 7½x9 I 7 x12 N
					8'-6" x 9'-4"	37.6		
					8'-6" x 9'-10"	39.8		
					8'-6" x 10'-4"	41.8		
					8'-6" x 10'-10"	44.0		
					9'-6" x 8'-4"	36.7		
					9'-6" x 8'-10"	39.0		
					9'-6" x 9'-4"	41.4		
					9'-6" x 9'-10"	43.8		
					9'-6" x 10'-4"	46.0		
160	41220	58270	Single	R.B.	8'-6" x 9'-10"	39.8	15x10	10x10 8x12 N
					8'-6" x 10'-4"	41.8		
					8'-6" x 10'-10"	44.0		
					9'-6" x 9'-4"	41.4		
					9'-6" x 9'-10"	43.8		
					9'-6" x 10'-4"	46.0		
					9'-6" x 10'-10"	48.4		
					9'-6" x 11'-4"	50.8		
					9'-6" x 11'-10"	53.2		
					6'-0" x 7'-4"	39.6		
			Back to Back	R.O.A.	6'-0" x 7'-10"	42.6		
					6'-0" x 8'-4"	45.4		
					6'-0" x 8'-10"	48.4		
					7'-0" x 7'-4"	47.2		
				R.B.	7'-0" x 7'-10"	50.8		
					7'-0" x 8'-4"	54.4		
					7'-0" x 8'-10"	58.0		
					7'-0" x 9'-4"	61.4		
170	46530	65790	Single	R.B.	9'-6" x 10'-4"	46.0	15x10	10x10 8x14 N 9x14 N
					9'-6" x 10'-10"	48.4		
					9'-6" x 11'-4"	50.8		
					9'-6" x 11'-10"	53.2		
					6'-0" x 8'-4"	45.4		
			Back to Back	R.O.A.	6'-0" x 8'-10"	48.4		
					7'-0" x 7'-4"	47.2		
				R.B.	7'-0" x 7'-10"	50.8		
					7'-0" x 8'-4"	54.4		
					7'-0" x 8'-10"	58.0		
180	52160	73760	Back to Back	R.B.	7'-0" x 7'-10"	50.8	16x10	12x10 10x12 9x14 N
					7'-0" x 8'-4"	54.4		
					7'-0" x 8'-10"	58.0		
					7'-0" x 9'-4"	61.4		
					7'-0" x 9'-10"	65.0		
					8'-6" x 8'-4"	66.4		
190	58120	82180	Back to Back	R.B.	7'-0" x 8'-10"	58.0	18x12	12x12 9x14 N
					7'-0" x 9'-4"	61.4		
					7'-0" x 9'-10"	65.0		
					8'-6" x 8'-4"	66.4		
					8'-6" x 8'-10"	70.6		
					8'-6" x 9'-4"	75.2		
					9'-6" x 8'-4"	73.4		

STANDARD ARRANGEMENTS

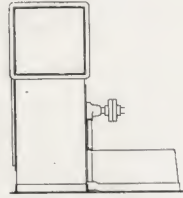
Planoidal fans are supplied in several standard arrangements as illustrated and described below. For "hand" of fan refer to page 19 and for position of openings to pages 37 to 47.



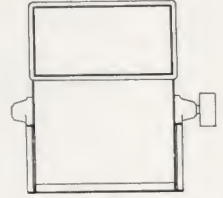
No. 1



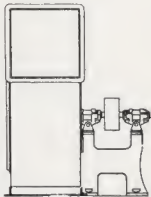
No. 3



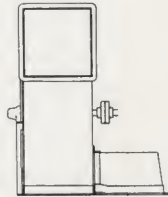
No. 5



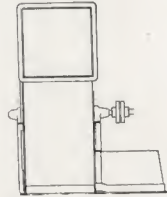
No. 7



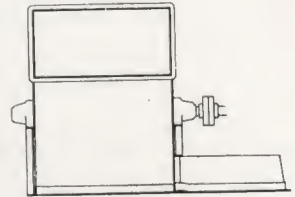
No. 2



No. 4



No. 6



No. 8

No. 1. FOR BELT DRIVE

Single fan. Pulley overhung. Includes housing, wheel, shaft, two bearings and pulley.

No. 2. FOR BELT DRIVE

Single fan. Wheel overhung. Includes housing, wheel, shaft, two bearings, pedestal and pulley.

No. 3. FOR DIRECT CONNECTION

Single fan. Includes housing, wheel and base. Wheel is overhung on engine or motor shaft.

No. 4. FOR DIRECT CONNECTION

Single fan. Includes housing, wheel, shaft, bearing in fan inlet, flanged coupling and base.

No. 5. FOR DIRECT CONNECTION

Single fan. Includes housing, wheel, shaft, bearing on drive side of fan, flanged coupling and base.

No. 6. FOR DIRECT CONNECTION

Single fan. Includes housing, wheel, shaft, two bearings, flexible coupling and base.

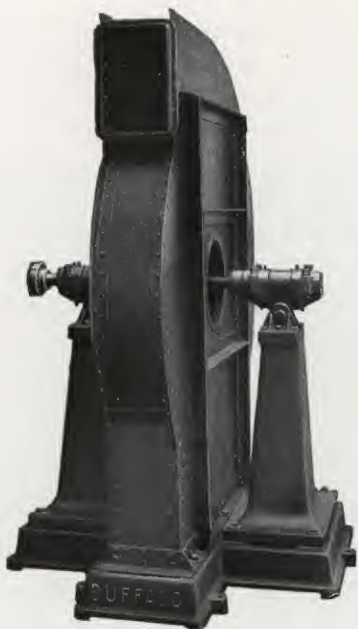
No. 7. FOR BELT DRIVE

Double fan. Pulley overhung. Includes housing, wheel, shaft, two bearings and pulley.

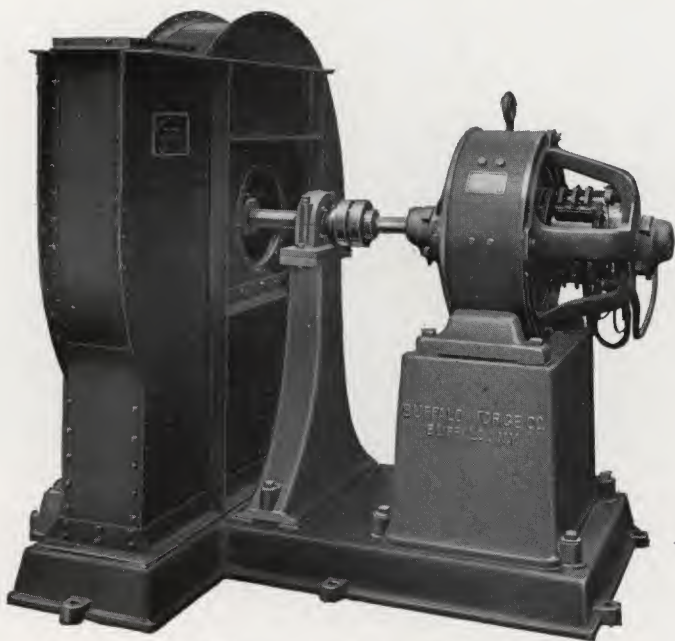
No. 8. FOR DIRECT CONNECTION

Double fan. Includes housing, wheel, shaft, two bearings, coupling and base.

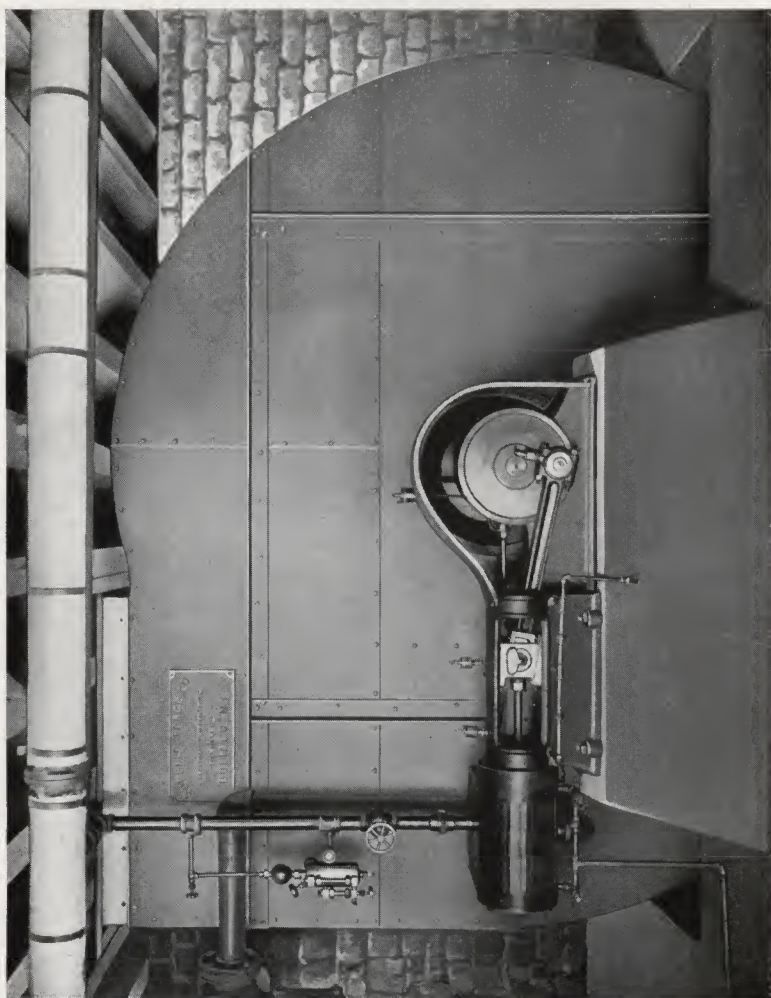
P L A N O I D A L (T Y P E L) F A N S



Steel Plate Pressure Blower with Independent Pedestal Bearings for Direct Connection to Motor



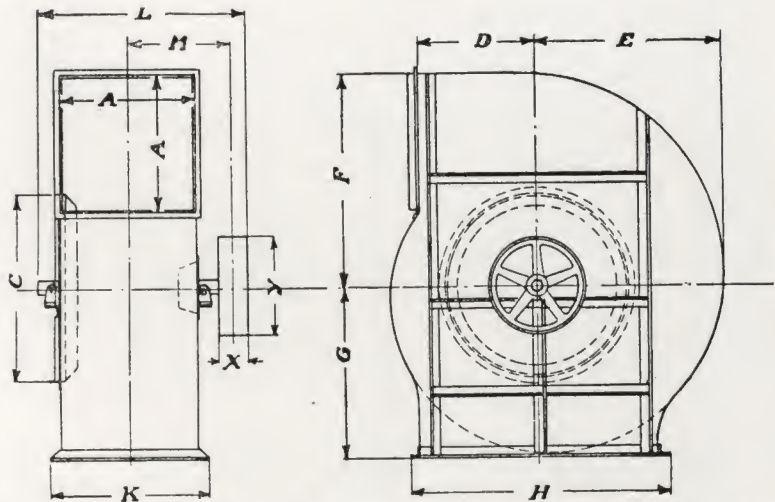
Steel Plate Pressure Blower and Motor



130" Planoidal (Type L) Fan Direct Connected to 6 x 10 Horizontal Class "N" Engine

P L A N O I D A L (T Y P E L) F A N S

PLANOIDAL (TYPE L) FANS



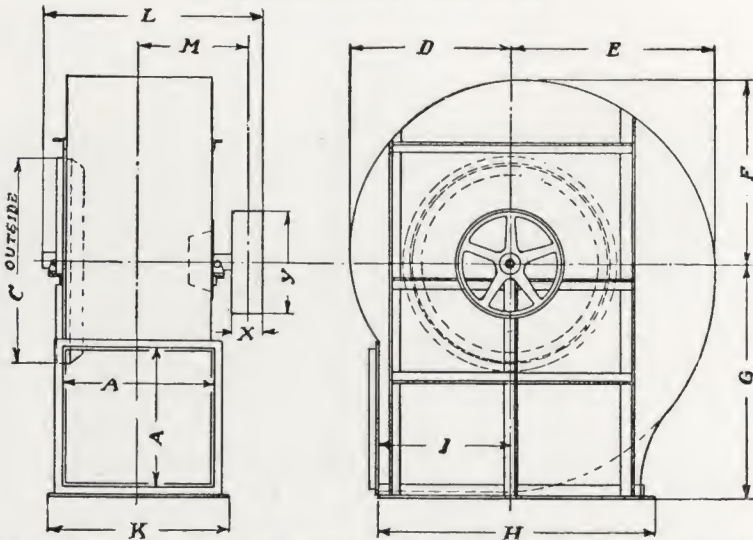
OVERHUNG PULLEY—FULL HOUSING—TOP HORIZONTAL DISCHARGE

Dimensions in Inches

Size	A	C		D	E	F	G	H	K	L	M	X	Y
		Exh.	Blow.										
30	10 ³ / ₄	13 ¹ / ₄	11 ⁵ / ₈	10 ¹ / ₂	14 ⁷ / ₈	16 ⁵ / ₈	14 ¹ / ₈	25	15	26 ¹ / ₈	13 ³ / ₄	3	8
35	12 ¹ / ₂	15 ³ / ₈	13 ¹ / ₂	12	17 ¹ / ₄	19 ¹ / ₄	16 ¹ / ₄	28	16 ³ / ₄	28	14 ³ / ₄	3	9
40	14 ¹ / ₄	17 ¹ / ₂	15 ¹ / ₂	13 ¹ / ₂	19 ⁵ / ₈	21 ⁷ / ₈	18 ³ / ₈	31	18 ¹ / ₂	29 ⁵ / ₈	15 ¹ / ₂	3	10
45	16 ¹ / ₈	19 ⁵ / ₈	17 ³ / ₈	15	22 ³ / ₈	25	20 ³ / ₄	34	20 ³ / ₈	31 ⁹ / ₁₆	16 ¹ / ₂	3	11
50	17 ⁷ / ₈	23	19 ¹ / ₄	16 ¹ / ₂	24 ³ / ₄	27 ⁵ / ₈	22 ⁷ / ₈	37	22 ¹ / ₈	34 ⁷ / ₁₆	18	4	12
55	19 ⁵ / ₈	25 ¹ / ₂	21 ¹ / ₄	18	27	30 ¹ / ₈	24 ⁷ / ₈	40	23 ⁷ / ₈	36 ¹ / ₁₆	18 ³ / ₄	4	14
60	21 ¹ / ₂	28 ¹ / ₂	23 ¹ / ₈	19 ¹ / ₂	29 ³ / ₈	32 ³ / ₄	27	43	25 ³ / ₄	40 ¹ / ₂	20 ³ / ₄	5	16
70	25	35	27	23	34 ¹ / ₂	38 ¹ / ₂	31 ¹ / ₂	50	29 ¹ / ₄	44	22 ¹ / ₂	5	18
80	28 ¹ / ₂	40	30 ⁷ / ₈	26	39 ⁵ / ₈	44 ¹ / ₄	36 ⁵ / ₈	56	32 ³ / ₄	49 ⁷ / ₈	25 ¹ / ₄	6	20
90	32 ¹ / ₄	45	34 ³ / ₄	29	44 ³ / ₈	49 ¹ / ₂	40 ¹ / ₄	62	36 ¹ / ₂	53 ³ / ₄	27 ¹ / ₄	6	24
100	35 ³ / ₄	50	38 ⁵ / ₈	32	49 ³ / ₈	55 ¹ / ₈	45 ⁵ / ₈	68	40	59 ³ / ₈	29 ³ / ₄	7	26
110	39 ¹ / ₄	55	42 ¹ / ₂	35	54 ¹ / ₈	60 ³ / ₈	49 ³ / ₈	75	44 ¹ / ₂	63 ³ / ₈	31 ¹ / ₄	8	28
120	43	60	46 ¹ / ₄	38	59 ¹ / ₄	66 ¹ / ₈	53 ¹ / ₄	81	48 ¹ / ₄	67 ⁵ / ₈	34	8	30
130	46 ¹ / ₂	65	50 ¹ / ₈	41	63 ⁷ / ₈	71 ¹ / ₄	58 ¹ / ₄	88	52 ³ / ₄	74 ⁵ / ₈	37 ¹ / ₂	9	34
140	50	70	54	44	69	77	62 ¹ / ₂	94	56 ¹ / ₄	78 ⁷ / ₈	39 ¹ / ₂	10	36
150	53 ¹ / ₂	75	57 ⁷ / ₈	47	73 ³ / ₄	82 ¹ / ₄	66 ¹ / ₄	100	59 ³ / ₄	86 ⁷ / ₈	43 ¹ / ₂	11	38
160	57	80	61 ³ / ₄	50	78 ⁷ / ₈	88	70 ³ / ₄	107	64 ¹ / ₄	91 ¹ / ₈	45 ¹ / ₂	12	40
170	60 ³ / ₄	85	65 ⁵ / ₈	54	83 ⁷ / ₈	93 ⁵ / ₈	75 ¹ / ₈	116	69	96	48	13	44
180	64 ¹ / ₄	90	69 ¹ / ₂	57	88 ⁵ / ₈	98 ⁷ / ₈	79 ³ / ₈	122	72 ¹ / ₂	104	52	14	46
190	67 ³ / ₄	95	73 ¹ / ₄	60	93 ³ / ₄	104 ⁵ / ₈	83 ⁷ / ₈	128	76	108 ¹ / ₄	54	15	48
200	71 ¹ / ₂	100	77 ¹ / ₄	63	98 ³ / ₄	110 ¹ / ₄	88 ¹ / ₄	134	79 ³ / ₄	116 ⁵ / ₈	58 ¹ / ₂	16	50

NOTE—Blowers have two Inlets but no Inlet Cone.

PLANOIDAL (TYPE L) FANS



OVERHUNG PULLEY—FULL HOUSING—BOTTOM HORIZONTAL DISCHARGE

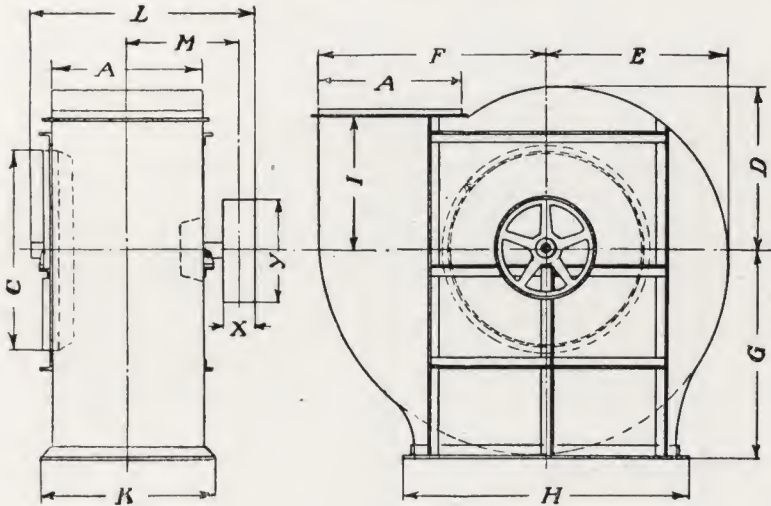
Dimensions in Inches

Size	A	C		D	E	F	G	H	I	K	L	M	X	Y
		Exh.	Blow.											
30	10 $\frac{3}{4}$	13 $\frac{1}{4}$	11 $\frac{5}{8}$	11 $\frac{3}{8}$	14 $\frac{7}{8}$	13 $\frac{1}{8}$	17 $\frac{5}{8}$	23	10 $\frac{1}{2}$	15	26 $\frac{1}{8}$	13 $\frac{3}{4}$	3	8
35	12 $\frac{1}{2}$	15 $\frac{3}{8}$	13 $\frac{1}{2}$	13 $\frac{1}{4}$	17 $\frac{1}{4}$	15 $\frac{1}{4}$	20 $\frac{1}{4}$	26	12	16 $\frac{3}{4}$	28	14 $\frac{3}{4}$	3	9
40	14 $\frac{1}{4}$	17 $\frac{1}{2}$	15 $\frac{1}{2}$	15 $\frac{1}{8}$	19 $\frac{3}{8}$	17 $\frac{3}{8}$	22 $\frac{7}{8}$	29	13 $\frac{1}{2}$	18 $\frac{1}{2}$	29 $\frac{5}{8}$	15 $\frac{1}{2}$	3	10
45	16 $\frac{1}{8}$	19 $\frac{5}{8}$	17 $\frac{3}{8}$	17 $\frac{1}{8}$	22 $\frac{3}{8}$	19 $\frac{3}{4}$	26	32	15	20 $\frac{3}{8}$	31 $\frac{9}{16}$	16 $\frac{1}{2}$	3	11
50	17 $\frac{7}{8}$	23	19 $\frac{1}{4}$	19	24 $\frac{3}{4}$	21 $\frac{7}{8}$	28 $\frac{5}{8}$	35	16 $\frac{1}{2}$	22 $\frac{1}{8}$	34 $\frac{7}{16}$	18	4	12
55	19 $\frac{5}{8}$	25 $\frac{1}{2}$	21 $\frac{1}{4}$	20 $\frac{3}{4}$	27	23 $\frac{7}{8}$	31 $\frac{1}{8}$	38	18	23 $\frac{7}{8}$	36 $\frac{1}{16}$	18 $\frac{3}{4}$	4	14
60	21 $\frac{1}{2}$	28 $\frac{1}{2}$	23 $\frac{1}{8}$	22 $\frac{5}{8}$	29 $\frac{3}{8}$	26	33 $\frac{3}{4}$	41	19 $\frac{1}{2}$	25 $\frac{3}{4}$	40 $\frac{1}{2}$	20 $\frac{3}{4}$	5	16
70	25	35	27	26 $\frac{1}{2}$	34 $\frac{1}{2}$	30 $\frac{1}{2}$	40	48	23	29 $\frac{1}{4}$	44	22 $\frac{1}{2}$	5	18
80	28 $\frac{1}{2}$	40	30 $\frac{7}{8}$	30 $\frac{3}{8}$	39 $\frac{5}{8}$	35	45 $\frac{1}{2}$	54	26	32 $\frac{3}{4}$	49 $\frac{7}{8}$	25 $\frac{1}{4}$	6	20
90	32 $\frac{1}{4}$	45	34 $\frac{3}{4}$	34 $\frac{1}{8}$	44 $\frac{3}{8}$	39 $\frac{1}{4}$	51	60	29	36 $\frac{1}{2}$	53 $\frac{3}{4}$	27 $\frac{1}{4}$	6	24
100	35 $\frac{3}{4}$	50	38 $\frac{5}{8}$	37 $\frac{7}{8}$	49 $\frac{3}{8}$	43 $\frac{5}{8}$	56 $\frac{3}{4}$	66	32	40	59 $\frac{1}{8}$	29 $\frac{3}{4}$	7	26
110	39 $\frac{1}{4}$	55	42 $\frac{1}{2}$	41 $\frac{5}{8}$	54 $\frac{1}{8}$	47 $\frac{7}{8}$	61 $\frac{3}{4}$	72 $\frac{1}{2}$	35	44 $\frac{1}{2}$	63 $\frac{3}{8}$	31 $\frac{3}{4}$	8	28
120	43	60	46 $\frac{1}{4}$	45 $\frac{1}{2}$	59 $\frac{1}{4}$	52 $\frac{3}{8}$	68 $\frac{1}{2}$	78 $\frac{1}{2}$	38	48 $\frac{1}{4}$	67 $\frac{5}{8}$	34	8	30
130	46 $\frac{1}{2}$	65	50 $\frac{1}{8}$	49 $\frac{1}{8}$	63 $\frac{7}{8}$	56 $\frac{1}{2}$	72 $\frac{3}{4}$	85	41	52 $\frac{3}{4}$	74 $\frac{5}{8}$	37 $\frac{1}{2}$	9	34
140	50	70	54	53	69	61	78 $\frac{1}{2}$	91	44	56 $\frac{1}{4}$	78 $\frac{7}{8}$	39 $\frac{1}{2}$	10	36
150	53 $\frac{1}{2}$	75	57 $\frac{7}{8}$	56 $\frac{3}{4}$	73 $\frac{3}{4}$	65 $\frac{1}{4}$	83 $\frac{3}{4}$	97	47	59 $\frac{3}{4}$	86 $\frac{7}{8}$	43 $\frac{1}{2}$	11	38
160	57	80	61 $\frac{3}{4}$	60 $\frac{5}{8}$	78 $\frac{7}{8}$	69 $\frac{3}{4}$	89 $\frac{1}{2}$	103 $\frac{1}{2}$	50	64 $\frac{1}{4}$	91 $\frac{1}{8}$	45 $\frac{1}{2}$	12	40
170	60 $\frac{3}{4}$	85	65 $\frac{5}{8}$	64 $\frac{3}{8}$	83 $\frac{7}{8}$	74 $\frac{1}{8}$	95 $\frac{1}{8}$	112	54	69	96	48	13	44
180	64 $\frac{1}{4}$	90	69 $\frac{1}{2}$	68 $\frac{1}{8}$	88 $\frac{5}{8}$	78 $\frac{3}{8}$	100 $\frac{3}{8}$	118	57	72 $\frac{1}{2}$	104	52	14	46
190	67 $\frac{3}{4}$	95	73 $\frac{1}{4}$	72	93 $\frac{3}{4}$	82 $\frac{7}{8}$	106 $\frac{1}{8}$	124	60	76	108 $\frac{1}{4}$	54	15	48
200	71 $\frac{1}{2}$	100	77 $\frac{1}{4}$	75 $\frac{3}{4}$	98 $\frac{3}{4}$	87 $\frac{1}{4}$	111 $\frac{3}{4}$	130	63	79 $\frac{3}{4}$	116 $\frac{7}{8}$	58 $\frac{1}{2}$	16	50

NOTE—Blowers have two Inlets but no Inlet Cone.

P L A N O I D A L (T Y P E L) F A N S

PLANOIDAL (TYPE L) FANS

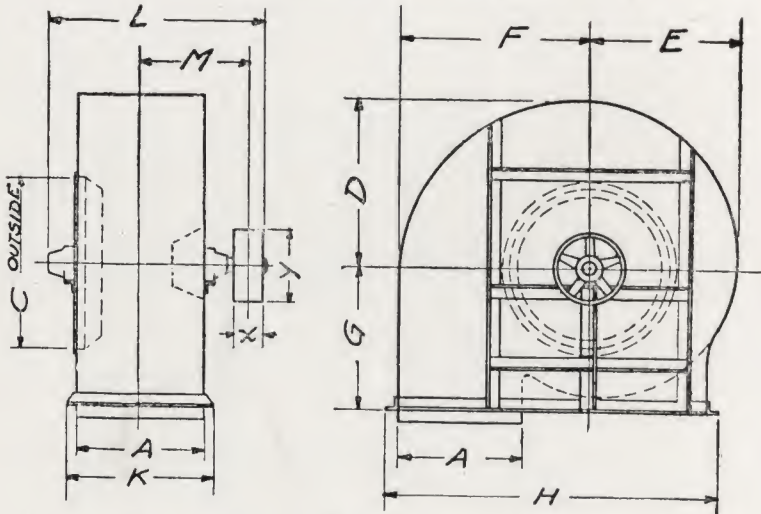


OVERHUNG PULLEY—FULL HOUSING—UP DISCHARGE
Dimensions in Inches

Size	A	C		D	E	F	G	H	I	K	L	M	X	Y
		Exh.	Blow.											
30	10 ³ / ₄	13 ¹ / ₄	11 ⁵ / ₈	11 ³ / ₈	13 ¹ / ₈	16 ⁵ / ₈	15 ⁷ / ₈	25	10 ¹ / ₂	15	26 ¹ / ₈	13 ³ / ₄	3	8
35	12 ¹ / ₂	15 ³ / ₈	13 ¹ / ₂	13 ¹ / ₄	15 ¹ / ₄	19 ¹ / ₄	18 ¹ / ₄	28	12	16 ³ / ₄	28	14 ³ / ₄	3	9
40	14 ¹ / ₄	17 ¹ / ₂	15 ¹ / ₂	15 ¹ / ₈	17 ³ / ₈	21 ⁷ / ₈	20 ⁵ / ₈	31	13 ¹ / ₂	18 ¹ / ₂	29 ⁵ / ₈	15 ¹ / ₂	3	10
45	16 ¹ / ₈	19 ⁵ / ₈	17 ³ / ₈	17 ¹ / ₈	19 ³ / ₄	25	23 ³ / ₈	34	15	20 ³ / ₈	31 ⁹ / ₁₆	16 ¹ / ₂	3	11
50	17 ⁷ / ₈	23	19 ¹ / ₄	19	21 ⁷ / ₈	27 ⁵ / ₈	25 ³ / ₄	37	16 ¹ / ₂	22 ¹ / ₈	34 ⁷ / ₁₆	18	4	12
55	19 ⁵ / ₈	25 ¹ / ₂	21 ¹ / ₄	20 ³ / ₄	23 ³ / ₈	30 ¹ / ₈	28	40	18	23 ³ / ₈	36 ¹ / ₁₆	18 ³ / ₄	4	14
60	21 ¹ / ₂	28 ¹ / ₂	23 ¹ / ₈	22 ⁵ / ₈	26	32 ³ / ₄	30 ³ / ₈	43	19 ¹ / ₂	25 ³ / ₄	40 ¹ / ₂	20 ³ / ₄	5	16
70	25	35	27	26 ¹ / ₂	30 ¹ / ₂	38 ¹ / ₂	35 ¹ / ₂	50	23	29 ¹ / ₄	44	22 ¹ / ₂	5	18
80	28 ¹ / ₂	40	30 ⁷ / ₈	30 ³ / ₈	35	44 ¹ / ₄	40 ⁵ / ₈	56	26	32 ³ / ₄	49 ⁷ / ₈	25 ¹ / ₄	6	20
90	32 ¹ / ₄	45	34 ³ / ₄	34 ¹ / ₈	39 ¹ / ₄	49 ¹ / ₂	45 ³ / ₈	62	29	36 ¹ / ₂	53 ³ / ₄	27 ¹ / ₄	6	24
100	35 ³ / ₄	50	38 ⁵ / ₈	37 ⁷ / ₈	43 ⁵ / ₈	55 ¹ / ₈	50 ³ / ₈	68	32	40	59 ¹ / ₈	29 ³ / ₄	7	26
110	39 ¹ / ₄	55	42 ¹ / ₂	41 ⁵ / ₈	47 ⁷ / ₈	60 ³ / ₈	55 ¹ / ₈	75	35	44 ¹ / ₂	63 ³ / ₈	31 ³ / ₄	8	28
120	43	60	46 ¹ / ₄	45 ¹ / ₂	52 ³ / ₈	66 ¹ / ₈	60 ¹ / ₄	81	38	48 ¹ / ₄	67 ⁵ / ₈	34	8	30
130	46 ¹ / ₂	65	50 ¹ / ₈	49 ¹ / ₈	56 ¹ / ₂	71 ¹ / ₄	64 ³ / ₄	88	41	52 ³ / ₄	74 ⁵ / ₈	37 ¹ / ₂	9	34
140	50	70	54	53	61	77	70 ³ / ₄	94	44	56 ¹ / ₄	78 ⁷ / ₈	39 ¹ / ₂	10	36
150	53 ¹ / ₂	75	57 ⁷ / ₈	56 ³ / ₄	65 ¹ / ₄	82 ¹ / ₄	74 ³ / ₄	100	47	59 ³ / ₄	86 ⁷ / ₈	43 ¹ / ₂	11	38
160	57	80	61 ³ / ₄	60 ⁵ / ₈	69 ³ / ₄	88	79 ⁷ / ₈	107	50	64 ¹ / ₄	91 ¹ / ₈	45 ¹ / ₂	12	40
170	60 ³ / ₄	85	65 ⁵ / ₈	64 ³ / ₈	74 ¹ / ₈	93 ⁵ / ₈	84 ⁷ / ₈	116	54	69	96	48	13	44
180	64 ¹ / ₄	90	69 ¹ / ₂	68 ¹ / ₈	78 ³ / ₈	98 ⁷ / ₈	89 ⁵ / ₈	122	57	72 ¹ / ₂	104	52	14	46
190	67 ³ / ₄	95	73 ¹ / ₄	72	82 ⁷ / ₈	104 ⁵ / ₈	94 ³ / ₄	128	60	76	108 ¹ / ₄	54	15	48
200	71 ¹ / ₂	100	77 ¹ / ₄	75 ³ / ₄	87 ¹ / ₄	110 ¹ / ₄	99 ³ / ₄	134	63	79 ³ / ₄	116 ⁷ / ₈	58 ¹ / ₂	16	50

NOTE—Blowers have two Inlets but no Inlet Cone.

PLANOIDAL (TYPE L) FANS



OVERHUNG PULLEY—FULL HOUSING—DOWN DISCHARGE

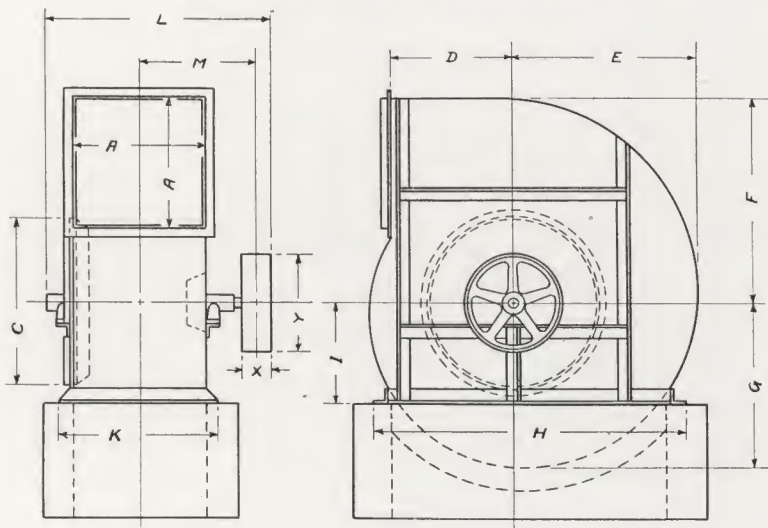
Dimensions in Inches

Size	A	C		D	E	F	G	H	K	L	M	X	Y
		Exh.	Blow.										
30	10 $\frac{3}{4}$	13 $\frac{1}{4}$	11 $\frac{5}{8}$	14 $\frac{7}{8}$	13 $\frac{1}{8}$	16 $\frac{5}{8}$	12 $\frac{3}{8}$	31 $\frac{1}{8}$	15	26 $\frac{1}{8}$	13 $\frac{3}{4}$	3	8
35	12 $\frac{1}{2}$	15 $\frac{3}{8}$	13 $\frac{1}{2}$	17 $\frac{1}{4}$	15 $\frac{1}{4}$	19 $\frac{1}{4}$	14 $\frac{1}{4}$	35 $\frac{1}{4}$	16 $\frac{3}{4}$	28	14 $\frac{3}{4}$	3	9
40	14 $\frac{1}{4}$	17 $\frac{1}{2}$	15 $\frac{1}{2}$	19 $\frac{5}{8}$	17 $\frac{3}{8}$	21 $\frac{1}{8}$	16 $\frac{1}{8}$	39 $\frac{3}{8}$	18 $\frac{1}{2}$	29 $\frac{5}{8}$	15 $\frac{1}{2}$	3	10
45	16 $\frac{1}{8}$	19 $\frac{5}{8}$	17 $\frac{3}{8}$	22 $\frac{3}{8}$	19 $\frac{3}{4}$	25	18 $\frac{1}{8}$	44	20 $\frac{3}{8}$	31 $\frac{9}{16}$	16 $\frac{1}{2}$	3	11
50	17 $\frac{7}{8}$	23	19 $\frac{1}{4}$	24 $\frac{3}{4}$	21 $\frac{7}{8}$	27 $\frac{5}{8}$	20	48 $\frac{1}{8}$	22 $\frac{1}{8}$	34 $\frac{7}{16}$	18	4	12
55	19 $\frac{5}{8}$	25 $\frac{1}{2}$	21 $\frac{1}{4}$	27	23 $\frac{7}{8}$	30 $\frac{1}{8}$	21 $\frac{3}{4}$	52 $\frac{1}{8}$	23 $\frac{7}{8}$	36 $\frac{1}{16}$	18 $\frac{3}{4}$	4	14
60	21 $\frac{1}{2}$	28 $\frac{1}{2}$	23 $\frac{1}{8}$	29 $\frac{3}{8}$	26	32 $\frac{3}{4}$	23 $\frac{5}{8}$	56 $\frac{1}{4}$	25 $\frac{3}{4}$	40 $\frac{1}{2}$	20 $\frac{3}{4}$	5	16
70	25	35	27	34 $\frac{1}{2}$	30 $\frac{1}{2}$	38 $\frac{1}{2}$	28 $\frac{1}{2}$	65 $\frac{1}{2}$	29 $\frac{1}{4}$	44	22 $\frac{1}{2}$	5	18
80	28 $\frac{1}{2}$	40	30 $\frac{7}{8}$	39 $\frac{5}{8}$	35	44 $\frac{1}{4}$	31 $\frac{1}{2}$	74 $\frac{1}{4}$	32 $\frac{3}{4}$	49 $\frac{7}{8}$	25 $\frac{1}{4}$	6	20
90	32 $\frac{1}{4}$	45	34 $\frac{3}{4}$	44 $\frac{3}{8}$	39 $\frac{1}{4}$	49 $\frac{1}{2}$	35 $\frac{1}{8}$	82 $\frac{1}{2}$	36 $\frac{1}{2}$	53 $\frac{3}{4}$	27 $\frac{1}{4}$	6	24
100	35 $\frac{3}{4}$	50	38 $\frac{5}{8}$	49 $\frac{3}{8}$	43 $\frac{3}{8}$	55 $\frac{1}{8}$	38 $\frac{7}{8}$	91 $\frac{1}{8}$	40	59 $\frac{1}{8}$	29 $\frac{3}{4}$	7	26
110	39 $\frac{1}{4}$	55	42 $\frac{1}{2}$	54 $\frac{1}{8}$	47 $\frac{7}{8}$	60 $\frac{3}{8}$	42 $\frac{5}{8}$	100 $\frac{3}{8}$	44 $\frac{1}{2}$	63 $\frac{3}{8}$	31 $\frac{3}{4}$	8	28
120	43	60	46 $\frac{1}{4}$	59 $\frac{1}{4}$	52 $\frac{3}{8}$	66 $\frac{1}{8}$	46 $\frac{3}{8}$	109 $\frac{1}{8}$	48 $\frac{1}{4}$	67 $\frac{5}{8}$	34	8	30
130	46 $\frac{1}{2}$	65	50 $\frac{1}{8}$	63 $\frac{7}{8}$	56 $\frac{1}{2}$	71 $\frac{1}{4}$	50 $\frac{1}{8}$	118 $\frac{1}{4}$	52 $\frac{3}{4}$	74 $\frac{5}{8}$	37 $\frac{1}{2}$	9	34
140	50	70	54	69	61	77	54	127	56 $\frac{1}{4}$	78 $\frac{7}{8}$	39 $\frac{1}{2}$	10	36
150	53 $\frac{1}{2}$	75	57 $\frac{7}{8}$	73 $\frac{3}{4}$	65 $\frac{1}{4}$	82 $\frac{1}{4}$	57 $\frac{3}{4}$	135 $\frac{1}{4}$	59 $\frac{3}{4}$	86 $\frac{7}{8}$	43 $\frac{1}{2}$	11	
160	57	80	61 $\frac{3}{4}$	78 $\frac{7}{8}$	69 $\frac{3}{4}$	88	61 $\frac{5}{8}$	145	64 $\frac{1}{4}$	91 $\frac{1}{8}$	45 $\frac{1}{2}$	12	38
170	60 $\frac{3}{4}$	85	65 $\frac{5}{8}$	83 $\frac{7}{8}$	74 $\frac{1}{8}$	93 $\frac{5}{8}$	65 $\frac{3}{8}$	155 $\frac{5}{8}$	69	96	48	13	40
180	64 $\frac{1}{4}$	90	69 $\frac{1}{2}$	88 $\frac{5}{8}$	78 $\frac{3}{8}$	98 $\frac{7}{8}$	69 $\frac{1}{8}$	163 $\frac{7}{8}$	72 $\frac{1}{2}$	104	52	14	44
190	67 $\frac{3}{4}$	95	73 $\frac{1}{4}$	93 $\frac{3}{4}$	82 $\frac{7}{8}$	104 $\frac{5}{8}$	73	172 $\frac{5}{8}$	76	108 $\frac{1}{4}$	54	15	46
200	71 $\frac{1}{2}$	100	77 $\frac{1}{4}$	98 $\frac{3}{4}$	87 $\frac{1}{4}$	110 $\frac{1}{4}$	76 $\frac{3}{4}$	181 $\frac{1}{4}$	79 $\frac{3}{4}$	116 $\frac{7}{8}$	58 $\frac{1}{2}$	16	48
													50

NOTE—Blowers have two Inlets but no Inlet Cone.

P L A N O I D A L (T Y P E L) F A N S

PLANOIDAL (TYPE L) EXHAUSTERS



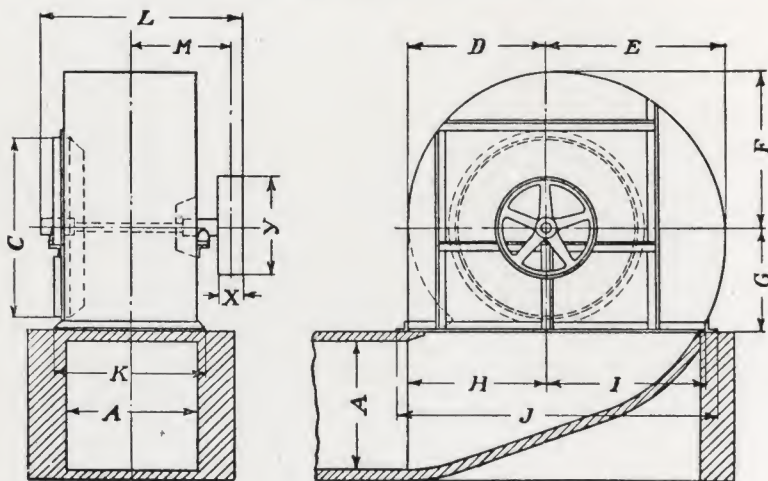
OVERHUNG PULLEY

THREE-QUARTER HOUSING—TOP HORIZONTAL DISCHARGE

Dimensions in Inches

Size	A	C	D	E	F	G	H		K	L	M	X	Y
60	21½	28½	19½	29⅜	32¾	26	45⅞	18	25¾	40½	20¾	5	16
70	25	35	23	34½	38½	30½	53¼	20½	29¼	44	22½	5	18
80	28½	40	26	39⅝	44¼	35	60⅝	23½	32¾	49⅞	25¼	6	20
90	32¼	45	29	44⅜	49½	39¼	67⅝	26	36½	53¾	27¼	6	24
100	35¾	50	32	49⅝	55⅞	43⅝	74½	28½	40	59⅞	29¾	7	26
110	39¼	55	35	54⅞	60⅝	47⅞	82¼	31½	44½	63⅝	31¾	8	28
120	43	60	38	59¼	66⅞	52⅝	89¾	34	48¼	67⅝	34	8	30
130	46½	65	41	63⅞	71¼	56½	97¾	37	52¾	74⅝	37½	9	34
140	50	70	44	69	77	61	105¼	39½	56¼	78⅞	39½	10	36
150	53½	75	47	73¾	82¼	65¼	111⅝	42½	59¾	86⅞	43½	11	38
160	57	80	50	78⅞	88	69¾	120	46	64¼	91⅞	45½	12	40
170	60¾	85	54	83⅞	93⅝	74⅞	127⅞	48½	69	96	48	13	44
180	64¼	90	57	88⅝	98⅞	78⅝	134⅞	51	72½	104	52	14	46
190	67¾	95	60	93¾	104⅞	82⅞	141⅝	54	76	108¼	54	15	48
200	71½	100	63	98¾	110¼	87¼	148¾	56½	79¾	116⅞	58½	16	50

PLANOIDAL (TYPE L) EXHAUSTERS



OVERHUNG PULLEY

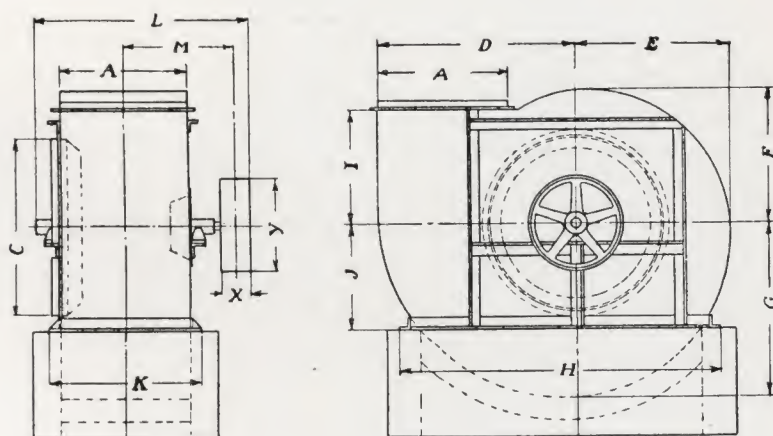
THREE-QUARTER HOUSING—BOTTOM HORIZONTAL DISCHARGE

Dimensions in Inches

Size	A	C	D	E	F	G	H	I	J	K	L	M	X	Y
60	21½	28½	22⅝	29⅜	26	18	22⅝	26⅞	52¾	25¾	40½	20¾	5	16
70	25	35	26½	34½	30½	20½	26½	30¾	61¼	29¼	44	22½	5	18
80	28½	40	30⅜	39⅝	35	23½	30⅜	35½	69⅞	32¾	49⅞	25¼	6	20
90	32¼	45	34⅞	44⅜	39¼	26	34⅞	40	78⅞	36½	53¾	27¼	6	24
100	35¾	50	37⅞	49⅜	43⅝	28½	37⅞	44¼	86⅞	40	59⅞	29¾	7	26
110	39¼	55	41⅝	54⅞	47⅞	31½	41⅝	48⅞	95¼	44½	63⅞	31¾	8	28
120	43	60	45½	59¼	52⅜	34	45½	53	103½	48¼	67⅝	34	8	30
130	46½	65	49⅞	63⅞	56½	37	49⅞	57⅞	112¼	52¾	74⅝	37½	9	34
140	50	70	53	69	61	39½	53	61¾	120¾	56¼	78⅞	39½	10	36
150	53½	75	56¾	73¾	65¼	42½	56¾	65⅞	128⅝	59¾	86⅞	43½	11	38
160	57	80	60⅝	78⅞	69¾	46	60⅝	70½	138⅞	64¼	91⅞	45½	12	40
170	60¾	85	64⅜	83⅞	74⅞	48½	64⅜	75⅞	147½	69	96	48	13	44
180	64¼	90	68⅞	88⅝	78⅜	51	68⅞	79⅜	155½	72½	104	52	14	46
190	67¾	95	72	93¾	82⅞	54	72	83⅞	163⅝	76	108¼	54	15	48
200	71½	100	75¾	98¾	87¼	56½	75¾	88¼	172	79¾	116⅞	58½	16	50

PLANOIDAL (TYPE L) FANS

PLANOIDAL (TYPE L) EXHAUSTERS



OVERHUNG PULLEY

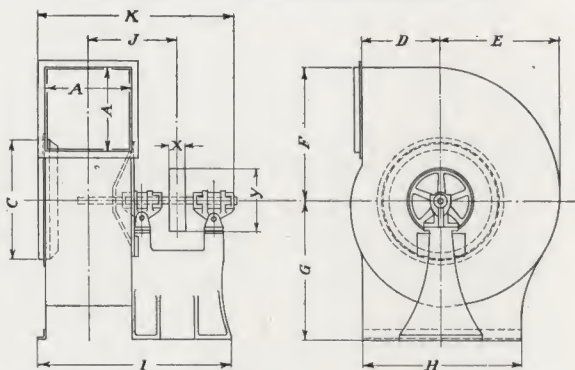
THREE-QUARTER HOUSING—UP DISCHARGE

Dimensions in Inches

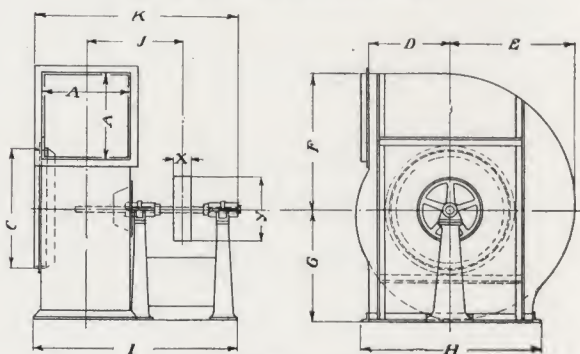
Size	A	C	D	E	F	G	H	I	J	K	L	M	X	Y
60	21½	28½	32¾	26	22⅝	29⅜	53⅞	19½	18	25¾	40½	20¾	5	16
70	25	35	38½	30½	26½	34½	62¾	23	20½	29¼	44	22½	5	18
80	28½	40	44¼	35	30⅜	39⅝	71¾	26	23½	32¾	49⅞	25¼	6	20
90	32¼	45	49½	39¼	34⅞	44⅜	79⅞	29	26	36½	53¾	27¼	6	24
100	35¾	50	55⅞	43⅝	37⅞	49⅜	88¼	32	28½	40	59⅞	29¾	7	26
110	39¼	55	60⅜	47⅞	41⅝	54⅞	97¼	35	31½	44½	63⅜	31¾	8	28
120	43	60	66⅞	52⅜	45½	59¼	106⅝	38	34	48¼	67⅝	34	8	30
130	46½	65	71¼	56½	49⅞	63⅞	115⅝	41	37	52¾	74⅝	37½	9	34
140	50	70	77	61	53	69	124⅝	44	39½	56¼	78⅞	39½	10	36
150	53½	75	82¼	65¼	56¾	73¾	132	47	42½	59¾	86⅞	43½	11	38
160	57	80	88	69¾	60⅝	78⅞	141¾	50	46	64¼	91⅞	45½	12	40
170	60¾	85	93⅝	74⅞	64⅜	83⅞	151½	54	48½	69	96	48	13	44
180	64¼	90	98⅞	78⅞	68⅞	88⅞	159½	57	51	72½	104	52	14	46
190	67¾	95	104⅝	82⅞	72	93¾	167⅞	60	54	76	108¼	54	15	48
200	71½	100	110¼	87¼	75¾	98¾	176½	63	56½	79¾	116⅞	58½	16	50

BUFFALO FORGE COMPANY

PLANOIDAL (TYPE L) EXHAUSTERS



This Style for 30 to 60-Inch Fans



This Style for 70 to 140-Inch Fans

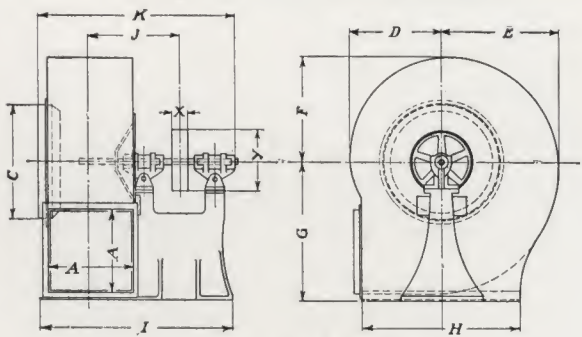
OVERHUNG WHEEL—FULL HOUSING—TOP HORIZONTAL DISCHARGE

Dimensions in Inches

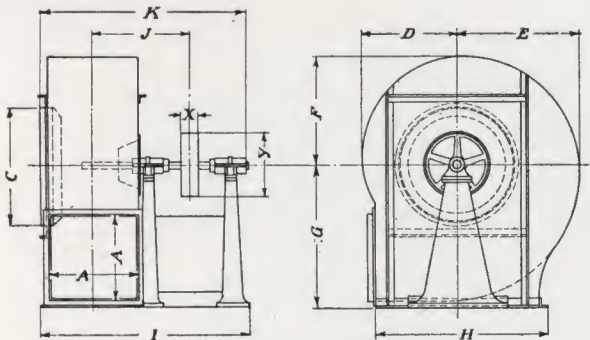
Size	A	C	D	E	F	G	H	I	J	K	X	Y
30	10 $\frac{3}{4}$	13 $\frac{1}{4}$	10 $\frac{1}{2}$	14 $\frac{7}{8}$	16 $\frac{5}{8}$	18	21	31	14 $\frac{1}{4}$	31 $\frac{1}{4}$	3	8
35	12 $\frac{1}{2}$	15 $\frac{3}{8}$	12	17 $\frac{1}{4}$	19 $\frac{1}{4}$	20 $\frac{3}{4}$	24	35 $\frac{1}{16}$	15 $\frac{5}{8}$	34 $\frac{1}{8}$	3	9
40	14 $\frac{1}{4}$	17 $\frac{1}{2}$	13 $\frac{1}{2}$	19 $\frac{5}{8}$	21 $\frac{7}{8}$	24	27	38 $\frac{1}{4}$	17 $\frac{1}{2}$	37 $\frac{1}{2}$	3	10
45	16 $\frac{1}{8}$	19 $\frac{5}{8}$	15	22 $\frac{3}{8}$	25	26 $\frac{5}{8}$	30	41 $\frac{7}{8}$	19 $\frac{5}{8}$	42	3	11
50	17 $\frac{7}{8}$	23	16 $\frac{1}{2}$	24 $\frac{3}{4}$	27 $\frac{5}{8}$	29 $\frac{1}{4}$	33	45 $\frac{3}{16}$	20 $\frac{15}{16}$	44 $\frac{3}{4}$	4	12
55	19 $\frac{5}{8}$	25 $\frac{1}{2}$	18	27	30 $\frac{1}{8}$	32	36	48 $\frac{7}{8}$	22 $\frac{1}{16}$	49	4	14
60	21 $\frac{1}{2}$	28 $\frac{1}{2}$	19 $\frac{1}{2}$	29 $\frac{3}{8}$	32 $\frac{3}{4}$	35	39	51 $\frac{3}{4}$	24 $\frac{3}{8}$	51 $\frac{7}{8}$	5	16
70	25	35	23	34 $\frac{1}{2}$	38 $\frac{1}{2}$	31 $\frac{1}{2}$	50	57 $\frac{1}{4}$	27 $\frac{1}{8}$	56 $\frac{5}{8}$	5	18
80	28 $\frac{1}{2}$	40	26	39 $\frac{5}{8}$	44 $\frac{1}{4}$	36 $\frac{5}{8}$	56	60 $\frac{3}{4}$	28 $\frac{7}{8}$	61 $\frac{3}{8}$	6	20
90	32 $\frac{1}{4}$	45	29	44 $\frac{3}{8}$	49 $\frac{1}{2}$	40 $\frac{1}{4}$	62	64 $\frac{1}{2}$	30 $\frac{3}{4}$	65 $\frac{1}{8}$	6	24
100	35 $\frac{3}{4}$	50	32	49 $\frac{3}{8}$	55 $\frac{1}{8}$	45 $\frac{5}{8}$	68	81 $\frac{1}{2}$	38 $\frac{1}{2}$	78 $\frac{1}{8}$	7	26
110	39 $\frac{1}{4}$	55	35	54 $\frac{1}{8}$	60 $\frac{3}{8}$	49 $\frac{5}{8}$	75	85 $\frac{1}{2}$	40 $\frac{7}{4}$	81 $\frac{1}{8}$	8	28
120	43	60	38	59 $\frac{1}{4}$	66 $\frac{1}{8}$	53 $\frac{1}{4}$	81	89 $\frac{1}{4}$	42 $\frac{1}{8}$	84 $\frac{7}{8}$	8	30
130	46 $\frac{1}{2}$	65	41	63 $\frac{7}{8}$	71 $\frac{1}{4}$	58 $\frac{1}{4}$	88	93 $\frac{1}{4}$	43 $\frac{7}{8}$	89 $\frac{3}{8}$	9	34
140	50	70	44	69	77	62 $\frac{1}{2}$	94	96 $\frac{3}{4}$	45 $\frac{5}{8}$	92 $\frac{7}{8}$	10	36

P L A N O I D A L (T Y P E L) F A N S

PLANOIDAL (TYPE L) EXHAUSTERS



This Style for 30 to 60-Inch Fans



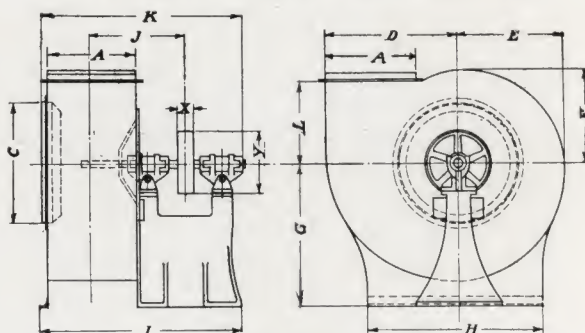
This Style for 70 to 140-Inch Fans

OVERHUNG WHEEL—FULL HOUSING—BOTTOM HORIZONTAL DISCHARGE

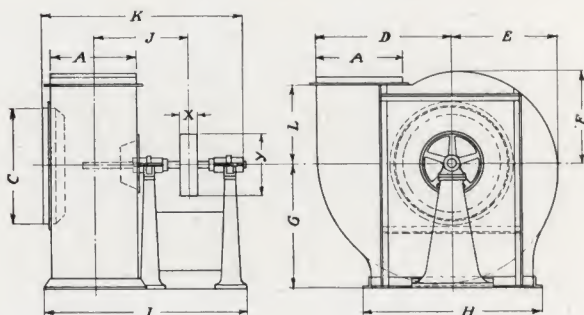
Dimensions in Inches

Size	A	C	D	E	F	G	H	I	J	K	X	Y
30	10 ³ / ₄	13 ¹ / ₄	11 ³ / ₈	14 ⁷ / ₈	13 ¹ / ₈	18	21	31	14 ¹ / ₄	31 ¹ / ₄	3	8
35	12 ¹ / ₂	15 ³ / ₈	13 ¹ / ₄	17 ¹ / ₄	15 ¹ / ₄	20 ³ / ₄	24	35 ¹ / ₁₆	15 ⁵ / ₈	34 ¹ / ₈	3	9
40	14 ¹ / ₄	17 ¹ / ₂	15 ¹ / ₈	19 ⁵ / ₈	17 ³ / ₈	24	27	38 ¹ / ₄	17 ¹ / ₂	37 ¹ / ₂	3	10
45	16 ¹ / ₈	19 ⁵ / ₈	17 ¹ / ₈	22 ³ / ₈	19 ³ / ₄	26 ⁵ / ₈	30	41 ⁷ / ₈	19 ⁵ / ₈	42	3	11
50	17 ⁷ / ₈	23	19	24 ³ / ₄	21 ⁷ / ₈	29 ¹ / ₄	33	45 ³ / ₁₆	20 ¹ / ₁₆	44 ³ / ₄	4	12
55	19 ⁵ / ₈	25 ¹ / ₂	20 ³ / ₄	27	23 ⁷ / ₈	32	36	48 ⁷ / ₈	22 ¹ / ₁₆	49	4	14
60	21 ¹ / ₂	28 ¹ / ₂	22 ⁵ / ₈	29 ³ / ₈	26	35	39	51 ³ / ₄	24 ³ / ₈	51 ⁷ / ₈	5	16
70	25	35	26 ¹ / ₂	34 ¹ / ₂	30 ¹ / ₂	40	48	57 ¹ / ₄	27 ¹ / ₈	56 ⁵ / ₈	5	18
80	28 ¹ / ₂	40	30 ³ / ₈	39 ⁵ / ₈	35	45 ¹ / ₂	54	60 ³ / ₄	28 ⁷ / ₈	61 ³ / ₈	6	20
90	32 ¹ / ₄	45	34 ¹ / ₈	44 ³ / ₈	39 ¹ / ₄	51	60	64 ¹ / ₂	30 ³ / ₄	65 ¹ / ₈	6	24
100	35 ³ / ₄	50	37 ⁷ / ₈	49 ³ / ₈	43 ⁵ / ₈	56 ³ / ₄	66	81 ¹ / ₂	38 ¹ / ₂	78 ¹ / ₈	7	26
110	39 ¹ / ₄	55	41 ⁵ / ₈	54 ⁷ / ₈	47 ⁷ / ₈	61 ³ / ₄	72 ¹ / ₂	85 ¹ / ₂	40 ¹ / ₄	81 ¹ / ₈	8	28
120	43	60	45 ¹ / ₂	59 ¹ / ₄	52 ³ / ₈	68 ¹ / ₂	78 ¹ / ₂	89 ¹ / ₄	42 ¹ / ₈	84 ⁷ / ₈	8	30
130	46 ¹ / ₂	65	49 ¹ / ₈	63 ⁷ / ₈	56 ¹ / ₂	72 ³ / ₄	85	93 ¹ / ₄	43 ⁷ / ₈	89 ³ / ₈	9	34
140	50	70	53	69	61	78 ¹ / ₂	91	96 ³ / ₄	45 ⁵ / ₈	92 ⁷ / ₈	10	36

PLANOIDAL (TYPE L) EXHAUSTERS



This Style for 30 to 60-Inch Fans



This Style for 70 to 140-Inch Fans

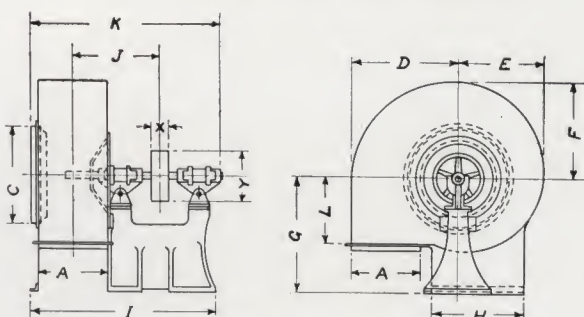
OVERHUNG WHEEL—FULL HOUSING—UP DISCHARGE

Dimensions in Inches

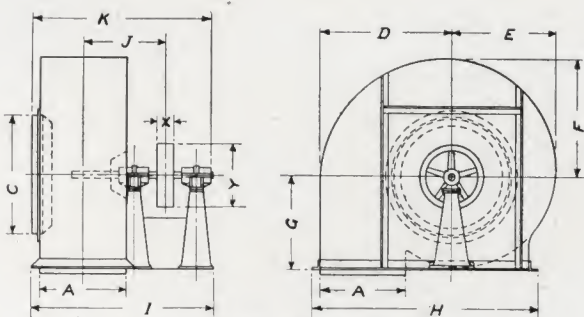
Size	A	C	D	E	F	G	H	I	J	K	L	X	Y
30	10 $\frac{3}{4}$	13 $\frac{1}{4}$	16 $\frac{5}{8}$	13 $\frac{1}{8}$	11 $\frac{3}{8}$	18	21	31	14 $\frac{1}{4}$	31 $\frac{1}{4}$	10 $\frac{1}{2}$	3	8
35	12 $\frac{1}{2}$	15 $\frac{3}{8}$	19 $\frac{1}{4}$	15 $\frac{1}{4}$	13 $\frac{1}{4}$	20 $\frac{3}{4}$	24	35 $\frac{1}{16}$	15 $\frac{5}{8}$	34 $\frac{1}{8}$	12	3	9
40	14 $\frac{1}{4}$	17 $\frac{1}{2}$	21 $\frac{7}{8}$	17 $\frac{3}{8}$	15 $\frac{1}{8}$	24	27	38 $\frac{1}{4}$	17 $\frac{1}{2}$	37 $\frac{1}{2}$	13 $\frac{1}{2}$	3	10
45	16 $\frac{1}{8}$	19 $\frac{5}{8}$	25	19 $\frac{3}{4}$	17 $\frac{1}{8}$	26 $\frac{5}{8}$	30	41 $\frac{7}{8}$	19 $\frac{5}{8}$	42	15	3	11
50	17 $\frac{7}{8}$	23	27 $\frac{5}{8}$	21 $\frac{7}{8}$	19	29 $\frac{1}{4}$	33	45 $\frac{3}{16}$	20 $\frac{15}{16}$	44 $\frac{3}{4}$	16 $\frac{1}{2}$	4	12
55	19 $\frac{5}{8}$	25 $\frac{1}{2}$	30 $\frac{1}{8}$	23 $\frac{7}{8}$	20 $\frac{3}{4}$	32	36	48 $\frac{7}{8}$	22 $\frac{13}{16}$	49	18	4	14
60	21 $\frac{1}{2}$	28 $\frac{1}{2}$	32 $\frac{3}{4}$	26	22 $\frac{5}{8}$	35	39	51 $\frac{3}{4}$	24 $\frac{3}{8}$	51 $\frac{7}{8}$	19 $\frac{1}{2}$	5	16
70	25	35	38 $\frac{1}{2}$	30 $\frac{1}{2}$	26 $\frac{1}{2}$	35 $\frac{1}{2}$	48	57 $\frac{1}{4}$	27 $\frac{1}{8}$	56 $\frac{5}{8}$	23	5	18
80	28 $\frac{1}{2}$	40	44 $\frac{1}{4}$	35	30 $\frac{3}{8}$	40 $\frac{3}{8}$	54	60 $\frac{3}{4}$	28 $\frac{7}{8}$	61 $\frac{3}{8}$	26	6	20
90	32 $\frac{1}{4}$	45	49 $\frac{1}{2}$	39 $\frac{1}{4}$	34 $\frac{1}{8}$	45 $\frac{3}{8}$	60	64 $\frac{1}{2}$	30 $\frac{3}{4}$	65 $\frac{1}{8}$	29	6	24
100	35 $\frac{3}{4}$	50	55 $\frac{1}{8}$	43 $\frac{5}{8}$	37 $\frac{1}{8}$	50 $\frac{3}{8}$	66	81 $\frac{1}{2}$	38 $\frac{1}{2}$	78 $\frac{1}{8}$	32	7	26
110	39 $\frac{1}{4}$	55	60 $\frac{3}{8}$	47 $\frac{7}{8}$	41 $\frac{5}{8}$	55 $\frac{1}{8}$	72 $\frac{1}{2}$	85 $\frac{1}{2}$	40 $\frac{1}{4}$	81 $\frac{1}{8}$	35	8	28
120	43	60	66 $\frac{1}{8}$	52 $\frac{3}{8}$	45 $\frac{1}{2}$	60 $\frac{1}{4}$	78 $\frac{1}{2}$	89 $\frac{1}{4}$	42 $\frac{1}{8}$	84 $\frac{7}{8}$	38	8	30
130	46 $\frac{1}{2}$	65	71 $\frac{1}{4}$	56 $\frac{1}{2}$	49 $\frac{1}{8}$	64 $\frac{3}{4}$	85	93 $\frac{1}{4}$	43 $\frac{7}{8}$	89 $\frac{3}{8}$	41	9	34
140	50	70	77	61	53	70 $\frac{3}{4}$	91	96 $\frac{3}{4}$	45 $\frac{5}{8}$	92 $\frac{7}{8}$	44	10	36

PLANOIDAL (TYPE L) FANS

PLANOIDAL (TYPE L) EXHAUSTERS



This Style for 30 to 60-Inch Fans



This Style for 70 to 140-Inch Fans

OVERHUNG WHEEL—FULL HOUSING—DOWN DISCHARGE

Dimensions in Inches

Size	A	C	D	E	F	G	H	I	J	K	L	X	Y
30	10 $\frac{3}{4}$	13 $\frac{1}{4}$	16 $\frac{5}{8}$	13 $\frac{1}{8}$	14 $\frac{7}{8}$	18	14 $\frac{1}{2}$	31	14 $\frac{1}{4}$	31 $\frac{1}{4}$	10 $\frac{1}{2}$	3	8
35	12 $\frac{1}{2}$	15 $\frac{3}{8}$	19 $\frac{1}{4}$	15 $\frac{1}{4}$	17 $\frac{1}{4}$	20 $\frac{3}{4}$	16 $\frac{3}{4}$	35 $\frac{1}{16}$	15 $\frac{5}{8}$	34 $\frac{1}{8}$	12	3	9
40	14 $\frac{1}{4}$	17 $\frac{1}{2}$	21 $\frac{7}{8}$	17 $\frac{3}{8}$	19 $\frac{5}{8}$	24	19 $\frac{1}{4}$	38 $\frac{1}{4}$	17 $\frac{1}{2}$	37 $\frac{1}{2}$	13 $\frac{1}{2}$	3	10
45	16 $\frac{1}{8}$	19 $\frac{5}{8}$	25	19 $\frac{3}{4}$	22 $\frac{3}{8}$	26 $\frac{5}{8}$	22	41 $\frac{7}{8}$	19 $\frac{5}{8}$	42	15	3	11
50	17 $\frac{7}{8}$	23	27 $\frac{5}{8}$	21 $\frac{7}{8}$	24 $\frac{3}{4}$	29 $\frac{1}{4}$	24 $\frac{1}{4}$	45 $\frac{3}{16}$	20 $\frac{15}{16}$	44 $\frac{3}{4}$	16 $\frac{1}{2}$	4	12
55	19 $\frac{5}{8}$	25 $\frac{1}{2}$	30 $\frac{1}{8}$	23 $\frac{7}{8}$	27	32	26 $\frac{1}{2}$	48 $\frac{7}{8}$	22 $\frac{13}{16}$	49	18	4	14
60	21 $\frac{1}{2}$	28 $\frac{1}{2}$	32 $\frac{3}{4}$	26	29 $\frac{3}{8}$	35	28 $\frac{3}{4}$	51 $\frac{3}{4}$	24 $\frac{3}{8}$	51 $\frac{7}{8}$	19 $\frac{1}{2}$	5	16
70	25	35	38 $\frac{1}{2}$	30 $\frac{1}{2}$	34 $\frac{1}{2}$	28 $\frac{1}{2}$	65 $\frac{1}{2}$	57 $\frac{1}{4}$	27 $\frac{1}{8}$	56 $\frac{5}{8}$		5	18
80	28 $\frac{1}{2}$	40	44 $\frac{1}{4}$	35	39 $\frac{5}{8}$	31 $\frac{1}{2}$	74 $\frac{1}{4}$	60 $\frac{3}{4}$	28 $\frac{7}{8}$	61 $\frac{3}{8}$		6	20
90	32 $\frac{1}{4}$	45	49 $\frac{1}{2}$	39 $\frac{1}{4}$	44 $\frac{3}{8}$	35 $\frac{1}{8}$	82 $\frac{1}{2}$	64 $\frac{1}{2}$	30 $\frac{3}{4}$	65 $\frac{1}{8}$		6	24
100	35 $\frac{3}{4}$	50	55 $\frac{1}{8}$	43 $\frac{5}{8}$	49 $\frac{3}{8}$	38 $\frac{7}{8}$	91 $\frac{1}{8}$	81 $\frac{1}{2}$	38 $\frac{1}{2}$	78 $\frac{1}{8}$		7	26
110	39 $\frac{1}{4}$	55	60 $\frac{3}{8}$	47 $\frac{7}{8}$	54 $\frac{1}{8}$	42 $\frac{5}{8}$	100 $\frac{3}{8}$	85 $\frac{1}{2}$	40 $\frac{1}{4}$	81 $\frac{1}{8}$		8	28
120	43	60	66 $\frac{1}{8}$	52 $\frac{3}{8}$	59 $\frac{1}{4}$	46 $\frac{3}{8}$	109 $\frac{1}{8}$	89 $\frac{1}{4}$	42 $\frac{1}{8}$	84 $\frac{7}{8}$		8	30
130	46 $\frac{1}{2}$	65	71 $\frac{1}{4}$	56 $\frac{1}{2}$	63 $\frac{7}{8}$	50 $\frac{1}{8}$	118 $\frac{1}{4}$	93 $\frac{1}{4}$	43 $\frac{7}{8}$	89 $\frac{3}{8}$		9	34
140	50	70	77	61	69	54	127	96 $\frac{3}{4}$	45 $\frac{5}{8}$	92 $\frac{7}{8}$		10	36



